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Brandeis University Bulletin

Graduate
School of Arts
and Sciences



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1983-84

Brandeis University
Waltham, Massachusetts

Graduate School of
Arts and Sciences

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Brandeis University does not discriminate against any applicant on the basis of race, color, religion, sex, age, national origin, or the presence of any handicap. The University operates under an affirmative action plan and encourages minorities and women to apply. Inquiries concerning discrimination under Title IX of the Educational Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973 may be referred to the Assistant to the President for Affirmative Action, Gryzmish 201, Brandeis University and/or to the Director, Office for Civil Rights, U.S. Department of Education, Washington, D.C.

Programs, requirements, fees and other information are set forth herein as they exist at the date of this publication. Brandeis University reserves the right to make changes without notice.

Brandeis University

Founded in 1948, Brandeis University is recognized as one of the finest private liberal arts universities in the United States. It received accreditation within five years, the shortest possible time, and was awarded recognition by Phi Beta Kappa in 1961, only 13 years after founding — the youngest institution so honored in over 100 years. It is the only Jewish-sponsored, nonsectarian institution of higher learning in America and was named for United States Supreme Court Justice Louis Dembitz Brandeis (1856-1941).

Of the approximately 2,000 accredited colleges and universities in the nation, Brandeis is one of only 100 recognized as research universities. As such, Brandeis combines the breadth and range of academic programs usually found at much larger universities with the intimate educational atmosphere of an undergraduate college.

Brandeis University is accredited by the New England Association of Schools and Colleges, Inc. Originally accredited in 1953, Brandeis was approved in 1977 for continuing membership in the Association for ten years, the maximum period permissible.

A Brandeis education encourages personal fulfillment, but only within the framework of social responsibility. Equipped by a liberal arts education, the individual sees reality as a whole with many intricately connected parts. That individual rejects the idea that there is only one truth, one perspective, one redeeming set of values. Study of the liberal arts is a time of inquiry, honest skepticism, and evolution of the intellect. Paradoxically, a liberal arts education — despite its lack of specialization — becomes sound preparation for a world that constantly makes old learning obsolete.

Brandeis, therefore, attaches prime importance to the liberal arts curriculum. It is designed to offer full academic opportunities for those students planning to pursue graduate or professional studies, as well as those whose educational objective is the baccalaureate degree.

For full information on the undergraduate curriculum, see the Bulletin of the College of Arts and Sciences.

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"It must always be rich in goals and ideals, seemingly attainable but beyond immediate reach . . .

"It must become truly a seat of learning where research is pursued, books written, and the creative instinct is aroused, encouraged, and developed in its faculty and students.

"It must ever be mindful that education is a precious treasure transmitted — a sacred trust to be held, used, and enjoyed, and if possible strengthened, then passed on to others upon the same trust."

— from the writings of
Louis Dembitz Brandeis (1856-1941)
on the goals of a university.

The Graduate School of Arts and Sciences

History and Organization

The Graduate School of Arts and Sciences was formally established in 1953 when the University's Board of Trustees authorized graduate study in the Department of Chemistry, Music, Psychology, and Near Eastern and Judaic Studies. The first Master of Arts degree was conferred in 1954; the first Master of Fine Arts degree in 1954; and the first Doctor of Philosophy degree in 1957.

The general direction of the Graduate School is vested in a Graduate Council of the Faculty composed of the President and the Dean of Faculty, ex officio; the Dean of the Graduate School; and one representative, usually the chairman, of each of the several University departments and committees offering graduate instruction. The members of the Graduate Council are appointed by the President on the recommendation of the Dean of the Graduate School. The functions of the Graduate Council, exercised in consonance with University policy, are to determine requirements for admission; to provide programs of study and examination; to establish and maintain requirements for graduate degrees; to approve candidacy for degrees; to make recommendations for degrees; to make recommendations for new areas of graduate study; to lay down such regulations as may be considered necessary or expedient for governing the Graduate School; and to exercise a general supervision over its affairs. The dean of the Graduate School is the chairman of the Graduate Council and the chief executive officer of the Graduate School.

Objectives

The underlying ideal of the Graduate School is to assemble a community of scholars, scientists, and artists, in whose company the student-scholar can pursue study and research as an apprentice. This objective is to be attained by individualizing programs of study and faculty, and fostering the intellectual potential of each student.

Degrees will be granted on the evidence of intellectual growth and development, rather than solely on the basis of formal course credits. Fulfillment of the minimum requirements cannot, therefore, be regarded as the sole requisite for degrees.

The Graduate School of Arts and Sciences is designed to educate broadly as it trains professionally. It offers courses of study leading to the master's and doctoral degrees.

Areas of Graduate Study

During the academic year 1982-83, graduate programs will be offered in the following areas:

1. Anthropology
2. Biochemistry
3. Biology
4. Photobiology
5. Biophysics
6. Chemistry
7. Classical and Oriental Studies
8. Comparative History
9. English and American Literature
10. History of American Civilization
11. Jewish Communal Service
12. Joint Program of Literary Studies
13. Mathematics
14. Music
15. Near Eastern and Judaic Studies
16. Physics
17. Politics
18. Psychology
19. Sociology
20. Theater Arts

Graduate School Office

The Graduate School office is located in the Rabb Graduate Center. The office is open Monday through Friday from 9 A.M. to 5 P.M. All requests for information, catalogs and application forms should be addressed to the Dean of the Graduate School of Arts and Sciences, Brandeis University, Waltham, Massachusetts 02254.

Dining Facilities

Graduate students may sign meal contracts for varying numbers of meals or buy cash meal books. Arrangements for these contracts are made at the Food Director's Office in Kutz Hall. A kosher kitchen is also maintained. Individual meals and light snacks may be purchased at Usdan Student Center.

Housing

Brandeis University has a limited number of apartment units available for single and married graduate students. All apartments are within easy walking distance of the campus. These include efficiency, one and two bedroom *unfurnished* apartments as well as efficiency and one bedroom *furnished* apartments. Single students may rent a space in an apartment and request the Graduate Housing Office assign a roommate. The one bedroom apartments are particularly designed to allow use as two separate bedrooms with a common kitchen and bathroom. Early application for housing is encouraged.

Information, rental rates and copies of the housing contract may be obtained by writing to the Office of Residence Life and University Housing, Brandeis University, Waltham, Massachusetts 02254.

In addition, the Graduate Housing Office maintains Off-Campus Housing Services (OCHS). OCHS has extensive listings of available housing in the area, a list of realtors who may be helpful in a search for housing, and descriptions and information about nearby neighborhoods and towns. OCHS does not serve as a real estate agent, but rather as a resource to help in locating housing.

Admission

As a rule, only well-qualified men and women who have completed the normal four-year program leading to the bachelor's degree will be considered for admission to the Graduate School. Graduates of foreign schools and others who have completed the equivalent of a bachelor's degree program may apply, describing the educational program they have completed.

Testing

Applicants for admission to the graduate programs in biochemistry, biophysics, politics, and psychology are required to take the Graduate Record Examination, including the aptitude test portion and preferably one advanced test in a field related to the proposed area of graduate study. Applicants for admission to the graduate program in psychology must also take the Miller Analogies Test. Applicants to the Jewish Communal Service program must submit the results of either the Graduate Record Examination or the Miller Analogies Test. All other applicants are urged to take the Graduate Record Examination. In order for the results of the Graduate Record Examination to be considered, the applicant should take the examination no later than January preceding the academic year for which application is made. Information concerning the Graduate Record Examination is available from the Educational Testing Service, Princeton, N.J. 08541, or Box 1025, Berkeley, Calif. 94704.

Foreign students, regardless of field of graduate study, are required to take the Test of English as a Foreign Language (TOEFL) unless English is their first language. Applications for admission to the test should be made to TOEFL, Educational Testing Service, Princeton, N.J. 08541, U.S.A. The test is administered at various established centers abroad.

Application

Specific requirements for each graduate program are to be found under the appropriate headings in this catalog. Each applicant should consult these requirements before filing an application. A student may apply to only one graduate department or program. Applicants to the Graduate School should write to the Dean of the Graduate School of Arts and Sciences, stating which program of study he or she wishes to enter. A catalog and appropriate forms will be forwarded to the applicant. The "Application for Admission" should be completed and returned in duplicate as soon as possible. Applicants requesting financial aid must file a CAPSFAS form. Closing dates for receipt of applications by the several graduate departments are included with the application materials.

Applications for admission for the Spring Term must be filed by December 1. Students are not usually admitted at midyear, and those who do gain admission are not normally eligible for financial aid.

All applicants must arrange to forward, in duplicate, official transcripts of all undergraduate and graduate work. In addition, they must have forwarded, on forms provided by the Graduate School, two letters of recommendation, preferably from professors with whom they have studied in their proposed area of study. Applicants who have engaged in graduate study elsewhere should request at least one of the recommendations from a professor with whom they have done graduate work.

Many departments also require the submission of samples of work as well as the materials described above. Applicants should consult departmental requirements in a later section of this catalog for enumeration of additional materials to be submitted.

All applications must be accompanied by an application fee of \$25, payable by check or money order to Brandeis University. No application will be processed until this fee is paid.

Admission Procedure

All applicants are considered on a competitive basis. The number of students admitted each year in each department is limited so that the Graduate School may operate effectively under its distinctive principles of individualized study and apprenticeship. Consequently, admission may sometimes be denied to qualified persons. Meeting the minimum standards of admission merely qualifies the applicant for a place in the group from which final selections will be made. Selections are based on the applicant's ability to do graduate work of high quality, as shown by: the distinction of his or her previous record, particularly in the proposed area of study; the letters of recommendation submitted in support of the application; and his or her presumed adaptability to the particular graduate programs offered by Brandeis University. In addition, knowledge of foreign languages, relevant practical experience in the field, samples of work, the results of the Graduate Record Examination, and indications of character are considered.

Each application for admission with all supporting records is first examined by the appropriate department or committee. The department or committee recommends to the Dean of the Graduate School which applicants should be selected for admission and for financial aid. The Dean reviews all applications in the light of departmental recommendations, and informs each applicant of the results in April.

Acceptance

A student who has been accepted for admission to the Graduate School will be notified by a letter specifying the date by which he or she must accept the offer of admission and awards, if any. If a student selected for admission indicates that he or she does not intend to accept the offer or fails to reply by the date specified, the admissions offer becomes void and another applicant may be accepted.

Brandeis University subscribes to the "Resolution Regarding Scholars, Fellows, Trainees and Graduate Assistants" of the Council of Graduate Schools in the United States. The resolution states:

"Acceptance of an offer of financial aid (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by an actual or prospective graduate student completes an agreement which both student and graduate school expect to honor. In those instances in which the student accepts the offer before April 15 and subsequently desires to withdraw, the student may submit in writing a resignation of the appointment anytime through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer."

Students who are accepted must provide the Graduate School Office with an official final transcript of their undergraduate record and of any graduate work in process at the time of acceptance. In addition, students who are accepted are *required to complete and return a medical questionnaire and a health insurance form*, which will be sent with notification of acceptance. All acceptances are conditioned on subsequent approval by the University Health Office. All persons admitted to the Graduate School must give evidence of their physical and psychological capacity to carry on their studies.

If, after having been admitted, a student cannot attend, he or she should notify the Dean of the Graduate School as soon as possible. If such students are to be admitted for a subsequent academic year, they must request reactivation of their applications at the appropriate time, and bring them up to date.

Foreign Students

Applicants who have been denied admission may reapply in a later year, particularly if they have had further training which would strengthen their applications or if they can submit additional letters of recommendation.

Admission to the Graduate School does not imply that the successful applicant has been accepted as a candidate for a graduate degree. Superior performance at Brandeis University is essential. Admission to candidacy for the M.A. or M.F.A. is granted by the graduate department or committee administering the program of study. Admission to candidacy for the Ph.D. is granted by the Graduate Council on the recommendation of the department or committee administering the program of study.

Readmission

Admission is valid only for one academic year. A student's record is reviewed annually, and he or she may be denied readmission. Students completing the requirements for the M.A. or M.F.A., and students who already hold a master's degree but who have not yet been admitted to candidacy for the doctorate, must make formal application for readmission by the first business day in March. The readmission application must be filed with the Graduate School Office.

Graduates of foreign colleges and universities who have the equivalent of an American bachelor's degree, and foreign students who have been graduated from American universities may compete for admission and financial assistance at Brandeis, which is authorized under Federal law to enroll non-immigrant alien students.

In order to ascertain the eligibility of the candidate, Brandeis University requires that each applicant file a *Preliminary Request for Application* form obtained by writing to either the Graduate School of Arts and Sciences or the Office of International Programs any time before September 1 of the year preceding the anticipated admission date. This information will be evaluated and the application form itself will be sent to those who qualify.

Final applications must be completed and returned by February of the year in which the student seeks fall admission. Successful applicants will be notified as soon as possible.

Entrance Examinations. All applicants whose major language is not English must take the Test of English as a Foreign Language (TOEFL); thorough competence in English is required for study at Brandeis. All applicants are urged to take the Graduate Record Examination (GRE). They should consult this catalog for the departments which may require this examination. For information concerning the administration of both these examinations, applicants should write to the Educational Testing Service, Princeton, N.J. 08541.

Financial Aid. Financial aid in the form of scholarships, fellowships, teaching assistantships and research assistantships is available to only a few of the most outstanding students. In any case, the total assistance offered usually covers only a small proportion of the student's total annual expenses. Hence the students, when applying for admission, should indicate a means of financial support. At least \$4,000 in United States currency is necessary to cover living costs for the nine-month academic year, exclusive of expenses for tuition, travel and summer or vacation periods.

Employment. The regulations of the United States Immigration and Naturalization Service limit strictly the amount of paid work that a student from abroad may do. During the summer vacation, the Immigration Service may permit the student to obtain off-campus employment. Such permission cannot be guaranteed, however. Students must petition on special United States government forms, through the Office of International Programs, for permission to accept such employment.

Requirements for the Degree

The following general requirements apply to the awarding of graduate degrees in all areas of study. For specific program requirements students should consult the appropriate section of this catalog.

Master of Arts

In order to qualify for a master's degree, the student must complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight half-courses of approved study. Departments may, at their option, require more than eight half-courses of graduate study. Departments offering master's programs may require that the candidate demonstrate a reading knowledge of at least one foreign language and pass satisfactorily a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral, or both. Where a thesis is required for the master's degree, two copies must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

The master's degree must be earned within four years from the inception of graduate study at Brandeis University.

Master of Fine Arts

In order to qualify for the degree of Master of Fine Arts in Music, the candidate must complete with distinction twelve half-courses at the graduate level, and must meet the specific requirements for the degree as set forth under the Music Department, *Requirements for the M.F.A. Degree*, in a later section of this catalog. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

In order to qualify for the degree of Master of Fine Arts in Theater Arts, the candidate must complete the equivalent of sixteen half-courses at the graduate level and must meet the specific requirements for the degree outlined under Theater Arts, *Requirements for the M.F.A. Degree*, in a later section of this catalog. Students enrolled for specialization in dramatic writing must submit two copies of a play in final form in lieu of a thesis.

The Master of Fine Arts degree must be earned within five years from the inception of graduate study at Brandeis University.

Doctor of Philosophy

In order to qualify for the degree of Doctor of Philosophy, a student must ordinarily complete a minimum of three years of graduate study, including two full years of residence and a third year devoted to the preparation of a doctoral dissertation. Under certain conditions, credit for advanced standing will be granted for work taken in residence in graduate schools of other universities. Each department or committee reserves the right to require prospective candidates for the degree to perform work in excess of its minimum standards to assure thorough mastery of the area.

Prospective candidates must demonstrate proficiency in at least one foreign language. In all areas of study the student must satisfactorily pass a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral, or both. In addition, all prospective candidates must write a doctoral dissertation and defend it in a final oral examination.

To be eligible for the Ph.D. degree in any given year, the student must have (1) been admitted to candidacy for the doctorate, (2) completed all residence requirements, and (3) passed all language and qualifying examinations, by the close of the semester preceding the semester in which the degree will be conferred.

Students entering Brandeis University with no previous graduate work must earn the doctorate within eight years from the inception of study. Students who are granted credit for a year of graduate work completed elsewhere must earn the degree within seven years from the inception of their study at Brandeis.

Language Requirements

There is no University requirement for foreign language competency at either the master's or doctoral level.

Each department or program determines which languages are acceptable as satisfying its foreign language requirement. Some departments may not require foreign language competency, while others may set requirements which will vary within the sub-fields offered by those departments.

In departments where languages are required, students are expected to satisfy the requirement as soon as possible. Completion of this requirement at another university does not satisfy the Brandeis requirement.

For specific requirements of each department or program, consult the departmental listing in the following section of this catalog.

Admission to Candidacy

A student who (a) has demonstrated a knowledge and mastery of the subject matter of the field at a level satisfactory to the department or committee; (b) has passed all departmental qualifying examinations; (c) has indicated a capacity for independent research of high quality; and (d) has satisfactorily completed all specific department or committee requirements for admission to candidacy may, at the recommendation of the department or committee, be admitted under the rules of the Graduate Council to candidacy for the degree of Doctor of Philosophy. In order to be eligible for the degree, the student must be admitted to candidacy at least one semester before it is awarded.

Application for Graduate Degrees

Candidates for the M.A., M.F.A., and Ph.D. degrees must file with the Graduate School Office an application for the degree no later than December 1 for a February degree and no later than March 1 for a May degree of the academic year in which the degree is to be conferred. Upon the written recommendation by a candidate's department or committee that the application be approved, the record will be reviewed by the Graduate Council which recommends the student to the University's Board of Trustees for the degree. In case of failure or withdrawal from candidacy in any year, the student must reapply by filing a new application in a later year.

Dissertation and Final Oral Examination

When a student is ready to embark upon the preparation of a doctoral dissertation, a Dissertation Reading Committee of no less than three faculty members, at least one of whom is a tenured member of the faculty, will be appointed by the chairman of the student's department. The student's principal adviser will serve as the chairman of this committee. The Dissertation Reading Committee will guide the research for and preparation of the dissertation. When this committee certifies its approval of the dissertation to both the Dean of the Graduate School and the chairman of the student's department, the latter, with the approval of the Dean of the Graduate School, will appoint a Dissertation Examining Committee to preside over the student's Final Oral Examination and will notify the candidate of the time and place of the Final Oral Examination at least three weeks prior to the scheduled date of the examination. Two copies of the dissertation, as well as an abstract of no more than 350 words, should be submitted to the Dissertation Reading Committee for approval. Style and format of dissertations are determined by the respective departments.

The dissertation, when approved by the readers, must then be deposited in the department office where it will be available for inspection by all interested members of the faculty for at least two weeks prior to the Final Oral Examination.

The Dean of the Graduate School will publish in the *Brandeis University Calendar* the time and place of a candidate's Final Oral Examination and the title of the doctoral dissertation. The Final Oral Examination will be open to any member of the faculty engaged in graduate instruction and to invited faculty members from other institutions.

The Dissertation Examining Committee, recommended by the department chairman and approved by the Dean of the Graduate School, must be composed of a minimum of three faculty examiners, at least one of whom shall be a tenured member of the faculty and one of whom shall be from a graduate department outside the student's own, though preferably from a related area.

The examination may be restricted to a defense of the dissertation, or may cover the whole field of the dissertation. The candidate will be notified by his or her department or committee of responsibility for coverage prior to the examination.

A report, signed by the Dissertation Examining Committee, certifying the candidate's successful performance on the Final Oral Examination, will be submitted to the Dean of the Graduate School.

Deposit and Publication of Dissertation

No later than the dates specified in the current Academic Calendar for February and May degrees, the candidate must deposit two copies of the finished dissertation, including the original typescript, in a state suitable for microfilm and Xerox publication. Both copies of the dissertation must have the signed approval of the dissertation supervisor and readers. One copy will be retained by the library, the other will be returned to the student, both bound. The candidate must also submit two copies of an abstract of the dissertation, not exceeding 350 words, which has been approved by the dissertation supervisor.

A detailed statement of the Graduate School publication regulations is available from the Graduate School Office. See also the statement in this catalog, under *Fees*, on the Final Doctoral Fee.

Academic Regulations

Registration

Every resident student must register in person at the beginning of each semester, whether attending regular courses of study, carrying on research or independent reading, writing a thesis or dissertation, or utilizing any academic service or facility of the University. Students who have completed their residence requirements and who wish to utilize any academic service or facility of the University must also register.

There is a charge of \$10 if registration is not completed at the time specified in the Academic Calendar.

Registration consists of payment of all fees for the semester and filing a Registration Card and other duly completed required forms. Program Cards are filed at a later date.

Program of Study

Before filing a Program Card, the student should plan a program of study in consultation with the chairman of the department. All courses for which the student registers for credit must be listed on the Program Card.

Audited courses must also be listed, noted as "audit," and the Program Card must be signed by instructors of such courses.

Graduate students may not normally register for an undergraduate course (numbered below 100) for degree or residence credit unless they secure the signed approval of both the instructor of that course and their department chairman. The student must then petition the Dean of the Graduate School for the desired credit, and must receive approval before or at the time of registration. Credit will not be given for undergraduate courses taken to make up deficiencies in the student's preparation for a graduate program of studies, nor will credit ordinarily be given for language courses that are not part of the student's program of studies. Under no circumstances may a student receive credit toward completion of degree or residence requirements for courses undertaken to aid in the completion of language requirements. Scholarship students may not apply their scholarships toward the remission of tuition for undergraduate courses taken to remedy deficiencies. The completed Program Card must be signed by the department chairman before submission at registration, and the department chairman will certify whether the program of study is full-time or part-time and, if part-time, whether one-quarter, one-half, or three-quarters time. Full-year courses must be re-entered at midyear. Students wishing to drop a full-year course at midyear must petition the Dean of the Graduate School for permission, after receiving the written approval of

the instructor of the course and of the chairman of their department. Students may not register at midyear for a full-year course without the written approval of the instructor of the course and their department chairman.

Program Cards are filed approximately two weeks after the opening days of instruction (see Academic Calendar for specific date) and are considered to be final.

Auditing Courses

The privilege of auditing courses without fee is extended to all regularly enrolled graduate students except special students. Special students may audit courses by paying for them at the same rate as those taken for credit. No courses may be audited without the permission of the instructor. Auditors may not take examinations or expect evaluation from the instructor. No credit is given for an audited course.

Change of Program

Only under unusual circumstances are students allowed to drop courses after filing their Program Cards. To do so, a Course Change Card is obtained from and returned to the Graduate School Registrar. Courses must be dropped no later than one week prior to the beginning of an examination period. Each course dropped is subject to a \$10 fee.

Registration in Terms of Time

Advanced students — those who have completed two full years of residence, either by graduate work at Brandeis or by receiving credit for graduate work done elsewhere — may register in terms of time, subject to the signed approval of their department chairman. Their Program Cards must indicate that they are registering full-time or a specific fraction thereof (one-quarter, one-half, or three-quarters).

Registration in terms of time is a device that helps to individualize programs of study and permits increased freedom for independent research for advanced graduate students. Registration in terms of time frees students to pursue a program of study that partially accepts or bypasses altogether the system of formal courses, although students registering in terms of time will usually register for an advanced research or dissertation course. Their time will be spent in such research and reading as will be most beneficial to their development as scholars.

Absence from Examinations

Students who are absent from a midyear or final examination without an accepted excuse will receive a failing grade for that examination. No students may be excused from such examination unless for emergency or medical reasons, nor may they be excused if they were able to notify the instructor in advance and failed to do so. Cases involving absence are referred to the chairman of the department who will decide whether a make-up examination shall be allowed, and who will notify the Dean of the Graduate School. The examination must be taken within six weeks of the opening of the next semester.

Grades and Course Standards

Graduate students are expected to maintain records of distinction in all courses. Letter grades will be used in all courses in which grading is possible. Courses graded "non-credit" are those which carry no credit but which are required of the student. In thesis or research courses, if a letter grade cannot be given at the end of each semester or academic year, "Credit" or "No Credit" may be used.

"No Credit" and any letter grade below B-minus are unsatisfactory grades in the Graduate School. A course in which the student receives an unsatisfactory grade will not be counted toward graduate credit.

At the end of each academic year the Registrar of the Graduate School will issue to each student a report of grades and of degree requirements satisfactorily completed.

Incompletes

A student who has not completed the research or written work for any course may receive a grade of "Inc." (incomplete) or a grade of failure at the discretion of the instructor in the course. A student who receives a grade of "Inc." must satisfactorily complete the work of the course in which the "Inc." was given in order to receive credit for the course and a letter grade. An "Inc." unless given by reason of the student's failure to attend a final examination, must be made up no later than the end of the term following the term in which it was received. When failure to take a final examination has resulted in an "Inc.," resolution of that grade to a letter grade must occur within six weeks of the beginning of the next semester. If a student requires additional time to settle an incomplete grade, he or she may petition the Dean of the Graduate School for an extension of time, provided the petition is signed by the instructor of the course and by the department chairman. Such a petition must be filed prior to the expiration of the deadline for making up an incomplete.

Credit for Work Done Elsewhere

Graduate level courses taken prior to matriculation at Brandeis University may not be counted toward fulfillment of the residence requirement for the Master of Arts degree, although a department may accept work taken elsewhere in partial fulfillment of specific course requirements for the degree. In that case, additional courses are designated to replace courses from which the student has been exempted.

A maximum of one term of residence credit for graduate level courses taken prior to matriculation may be counted toward fulfillment of the residence requirements for the Master of Fine Arts degree.

Students admitted to Ph.D. programs may file an application to have graduate level courses taken prior to matriculation counted toward fulfillment of residence requirements at this institution. A maximum of one year of residence credit may be granted.

Applicants for transfer credit will not necessarily be granted the credit requested. Each department reserves the right to require of any student work in excess of its minimum standards to assure thorough mastery of the area of study. In all cases, courses being transferred must carry a grade of "B" or better and must have been earned at an appropriately accredited institution.

After completing one term of residence at a full-time rate, or the equivalent at a part-time rate, students eligible to apply for transfer credit may do so. Forms are

obtained at the Graduate School Office and are submitted to the student's department for its approval. The form is then forwarded to the Dean of the Graduate School for final approval. The Dean will advise the applicant of any action taken.

Credit for work at another institution taken concurrently with studies in the Graduate School must be approved for potential transfer credit by both the student's department and the Dean of the Graduate School prior to registration for such courses. Such approval is granted only in unusual circumstances. Students who formally cross-register with Boston College, Boston University and/or Tufts University through the Consortium do not need prior approval.

Residence Requirements

Residence requirements for all graduate degrees are computed by determining the amount of registration for credit and the tuition charges. Part-time students and teaching assistants pursuing part-time programs of study for credit complete their residence requirements when their fractional programs (one-quarter, one-half, three-quarters) total the amount required of a full-time student.

Master of Arts

The minimum residence requirement for all students is one academic year on a full-time graduate credit program at the full tuition or the equivalent thereof in part-time study. Transfer credit may not be applied to residence requirements for the Master of Arts degree.

Master of Fine Arts

The minimum residence requirement for all students in Music is three semesters at a full-time rate, at the full tuition rate for each semester, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

The minimum residence requirement for all students in Theater Arts is four semesters at a full-time rate, at the full tuition rate for each semester, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

Doctor of Philosophy

The minimum residence requirement for all students is two academic years on a full-time graduate credit program for each year, at the full tuition rate for each year, or the equivalent thereof in part-time study. A maximum of one year's approved transfer credit may be granted toward residence for the Ph.D. degree.

Full-Time Resident Students

A full-time student is one who devotes the entire time, during the course of the academic year, to a program of graduate work at Brandeis University, to the exclusion of any occupation or employment. In exceptional cases, however, a student may accept outside employment with the approval of the department chairman.

A full-time program may include a combination of teaching and research assistance, work leading to the fulfillment of degree requirements, such as preparation for qualifying, comprehensive, and final examinations, or supervised reading and research, or the writing of M.A. theses and Ph.D. dissertations, as well as regular course work.

A full-time resident student may take as many courses for credit in any semester as are approved by the department chairman, but no student may receive credit for, or be charged for, more than a full-time program in any semester. Thus the minimum residence requirement for any degree may not be satisfied by an accelerated program of study or by payment of more than the full-time tuition rate in any single academic year.

Ph.D. candidates and students for whom the M.A. and M.F.A. degrees are terminal degrees may continue as full-time students on completion of their residence requirements by registering at the post-residence fee rate (See p.10).

Part-Time Resident Students

A part-time student is one who devotes less than the entire time to a program of graduate work at Brandeis University. Students may register for a credit program of one-quarter, one-half, or three-quarters time. A part-time student may engage in outside employment with the permission of the department chairman.

Students wishing to pursue part-time residence study leading to a graduate degree must explain in writing, at the time they seek admission, why full-time study is not possible. Students receiving financial aid from the University, who wish to change their status from full-time to part-time residency, must file with the Graduate School Office an explanation of why full-time study is no longer possible.

Post-Resident Students

A graduate student who has completed residence requirements and who registers in order to utilize academic services or University facilities while completing degree requirements is a post-resident student.

Fees and Expenses

Special Students

Properly qualified persons who wish to audit or to take courses without working for a degree will be admitted. Special students are not eligible for University loans, scholarships, fellowships, teaching or research assistantships, nor will they be considered for resident counselorships. Special students who later wish to change their status to that of part-time or full-time students working for a degree must apply for admission as resident students. They must also file a special petition if they wish credit to be accepted for any courses taken at Brandeis as special students. Credit for such course work may be granted in exceptional cases.

Leave of Absence

Students who have not completed their residence requirements may petition for leave of absence. The petition must have the approval of both the chairman of the department and the Dean of the Graduate School. Leaves of absence up to one year will normally be granted to students in good academic standing who present compelling personal reasons or need to do work off campus in connection with their graduate studies. Time spent on authorized leaves of absence will not be deducted from the maximum time permitted to complete degree requirements.

If for any reason a student must extend a leave of absence, he or she must request such extension in writing before the leave of absence expires. Failure to do so will result in being automatically dropped from the Graduate School roster.

Continuation

Graduate students who have completed residence requirements and who are not registered during the period in which they are completing degree requirements are considered Continuation Students. A student in this category is not eligible for a leave of absence, except for reason of ill health. (See Fees, p.10).

Withdrawal

A student who wishes to withdraw from the Graduate School at any time before the end of the academic year must give immediate written notice to the department chairman and to the Dean of the Graduate School. Failure to comply may subject the student to dishonorable discharge, refusal of readmission, cancellation of the privilege of securing an official transcript and, in the case of a student withdrawing within 30 days of the beginning of classes, loss of eligibility for partial refund of tuition. Such a student must pay tuition for the full semester. Per-

mission to withdraw will not be granted if the student has not discharged all financial indebtedness to the University or has not made arrangements for subsequent payment to the satisfaction of the controller's office.

Discipline

The disciplinary authority of the University is vested in the President of the University and, subject to his reserved powers, in the Dean of the Graduate School of Arts and Sciences and in the principal administrative officers, including the chairmen of the several graduate programs, in all cases involving graduate students.

Original jurisdiction in any case involving infraction of any rule or regulation or standard of conduct by a graduate student shall lie within the administrative officer of the University who is immediately concerned. Serious cases will be referred for hearing to the Disciplinary Committee of the Faculty Council of the Graduate School of Arts and Sciences, chaired by the Dean of the Graduate School. The chairman of the student's department shall be invited to attend any meeting at which such a case is discussed.

The Graduate Student Council has been invited to elect annually one graduate student from the School of Social Sciences, one student from the School of Science, and one student from the Schools of Creative Arts and Humanities, together to comprise a panel of three, who may form the Graduate School's Committee on Discipline to consider disciplinary cases involving non-academic offenses when the student who is being considered for discipline so requests.

Exclusion, Dismissal or Expulsion

The University reserves the right to dismiss or exclude at any time any student whose character, conduct, academic standing or financial indebtedness it regards as undesirable, through disciplinary procedures established in the Graduate School. Neither the University nor any of its trustees or officers shall be under any liability whatsoever for its disciplinary action, exclusion or dismissal.

The University also reserves the right to revoke, cancel or reduce at any time any financial or honorific award made to any graduate student, for character, conduct, academic standing or financial indebtedness regarded by the University as undesirable; neither the University nor any of its trustees or officers shall be under any liability whatsoever for cancelling, revoking or reducing any award.

Payment of tuition and other fees due on the day of registration is a part of the registration procedure. A student who is not prepared to pay such fees on the day of registration will be refused the privilege of registration.

A student who defaults in the payment of indebtedness to the University shall be subject to suspension, dismissal, and refusal of a transfer of credits or issuance of a transcript.

Such indebtedness includes, but is not limited to, delinquency of a borrower in repaying a loan administered by the Student Loan Office, and the inability of that office to collect such a loan because the borrower has discharged the indebtedness through bankruptcy proceedings. If the student is a degree candidate, his or her name will be stricken from the rolls.

A student who has been suspended or dismissed for nonpayment of indebtedness to the University may not be reinstated until such indebtedness is paid in full.

Application Fee: \$25. Payable by all applicants for admission at the time the application for admission is submitted. It is not refundable. Checks and money orders should be made payable to Brandeis University. No application for admission will be processed until this fee is paid. This fee is not required of Brandeis graduates.

Tuition Fee: The fees for tuition in the Graduate School for 1983-84 are as follows:

Full-time resident students: \$8,550 per year, or \$4,275 per term.

Part-time resident students:

Per Term	Per Year	Fraction Program of Study
\$3,206.25	\$6,412.50	Three-quarters
\$2,137.50	\$4,275.00	One-half
\$1,068.75	\$2,137.50	One-quarter

Special Students: \$1068.75 per course per term.

In view of the constantly increasing costs of education, students may expect one or more tuition increases during their academic careers.

Post-Residence Fee: Students who have completed their residence requirements and who wish to continue in residence to utilize any academic service or University facility must register at the usual tuition rates. Graduate students whose tuition is not being paid from scholarship or fellowship funds awarded by the University or other sources may petition the Dean of the Graduate School for a reduction of the post-residence fee to \$725. Students who continue to utilize any academic service or University facility after having completed residence, but who have failed to register, are subject to disciplinary action by the Dean of the Graduate School. A student who is eligible for registration on the post-residence basis may file a Program Card for full-time study, in terms of courses or in terms of time or any combination thereof, provided the department chairman approves of the program of study as being a post-residence program and signs the Program Card.

Mixed Tuition Fee: In the event that a student needs to register for only a part-time program (one-quarter, one-half, or three-quarters) in order to complete residence requirements, but wishes to register for additional courses or take a fuller program of study, he or she shall be charged for the part-time program needed to complete residence, plus the post-residence fee.

Late Registration Fee: \$10. Payable for failure to complete registration at the time announced by the Graduate School Office.

Change-of-Program Fee: \$10. Payable by any graduate student who wishes to drop a course after filing Study Cards.

Incomplete Records Fee: \$25. Payable for failure to complete administrative requirements by date(s) specified in the Academic Calendar and/or Catalog (e.g., late filing of Health Examination Report, failure to register, etc.).

Continuation Fee: \$20. Payable annually by graduate students who have completed residence requirements and who are not registered during the period in which they are preparing for the completion of degree requirements. Students in this category are not eligible for leaves of absence.

Master's Fee: \$50. A candidate for the M.A. or the M.F.A. who is subject to the Continuation Fee and who earns a degree in any semester following one in which he or she has not been in residence, shall pay the Master's Fee. The fee is chargeable only once.

Final Doctoral Fee: \$250. This fee covers all costs for the year in which the Ph.D. degree will be conferred, including the costs for the microfilm publication of the dissertation, publication of the abstract of the dissertation in *Dissertation Abstracts*, issuance of a Library of Congress number and appropriate library cards, binding two copies of the dissertation, one for use in the University Library, and one Xerox-printed copy in book form for the author. The Final Doctoral Fee covers the rental expenses for academic robes for graduation and the cost of the diploma. Students who have been in residence in their final year may deduct any tuition charges which they may have paid to the University in that final year. Students who have paid the Continuation Fee in the final year may deduct that fee from the Final Doctoral Fee.

NOTE: All candidates for the Ph.D. degree must pay the \$250 Final Doctoral Fee prior to the receipt of their degrees.

Reinstatement Fee: \$10. Payable by a student who, after withdrawal, suspension or dismissal, has been reinstated with the consent of the Dean of the Graduate School.

Transcript Fee: \$2. Students, former students, and graduates who request official transcripts of their records in the Graduate School are charged \$2 for each copy issued after the first one, which is free. Requests by mail for transcripts must be accompanied by a check in the correct amount, payable to Brandeis University. Transcripts will be issued only to those students whose university financial records are in order.

Diploma Fee: \$10. Payable by candidates for the M.A. and M.F.A. degrees.

Student Health Fee: \$160. Entitles the graduate student to use of the Health Services.

Student Insurance Fee: \$215. Payment of the Insurance Fee entitles the graduate student to participate in the benefits of the Health Insurance Program. The fee is payable at registration and no portion is refundable. Student Insurance is optional for Special Students.

Dependent Insurance Coverage: Although the health services offered at Stoneman Infirmary are not extended to dependents of students, an optional family health insurance plan is available to married students for a fee of \$550. Special Students are not eligible for this plan.

Parking Fee: \$5-\$35. Payable annually at fall registration for privilege of parking an automobile on campus. Fee varies with assigned parking area.

Refunds

The only fee which may be refundable, in part, is the tuition fee. No refund of the tuition fee will be made because of illness, absence or dismissal during the academic year. If a student withdraws, he or she may petition the Dean of the Graduate School for a partial refund of tuition in accordance with the following:

1. Tuition:

Withdrawal: before the opening day of instruction: 100% of semester tuition. On or before the second Friday following the opening day of instruction: 75% of semester tuition.

On or before the fifth Friday following the opening day of instruction: 50% of semester tuition.

After the fifth Friday following the opening day of instruction: no refund.

2. Scholarship: In the case of a scholarship student who withdraws, the student's account will be credited with the same proportion of the semester scholarship as charged for tuition: 25% if the student leaves on or before the second Friday; 50% on or before the fifth Friday; and, 100% thereafter. The balance of the scholarship will be cancelled.

All refunds are subject to review and final approval by the University Controller.

Financial Assistance

To help students whose records indicate scholarly promise, the University makes available special scholarships and fellowships and a variety of awards and work opportunities. No student is eligible for aid without filing with the Graduate School Office a standard financial aid form (GAPSFAS). All scholarships and fellowships are granted for one academic year; therefore, a registered student who holds a scholarship or fellowship must apply annually for a renewal by filing the "Application for Financial Assistance."

All awards are granted and accepted with the understanding that they may be revoked or reduced at any time for undesirable conduct or poor academic standing.

Ordinarily, no student may hold a fellowship, scholarship, or teaching assistantship for more than two years of study for the M.A. degree, for more than three years of study for the M.F.A. degree, or for more than four years of study for the Ph.D. degree. Ordinarily, no student may receive a scholarship, fellowship, or teaching assistantship after one year of study at the post-residence fee. Priority in making awards is given to full-time students and teaching assistants.

In the case of a student receiving financial aid from Brandeis University, whether in the form of a teaching assistantship, scholarship or fellowship, the approval of the Dean of the Graduate School is required, in addition to the approval of the department chairman, before the student may engage in outside employment.

Scholarships

A scholarship is an award, on grounds of scholarly ability and need, of financial credit that will be used exclusively for remission of tuition fees. Full scholarships and partial scholarships are available. Scholarship students are liable for all but tuition charges.

Fellowships

A fellowship is an academic award of honor to outstanding students of good character to help them in furthering advanced study and research. The amount of the stipend depends on the quality of the student's record and performance; need is also considered in most cases. A fellowship recipient must pay tuition fees unless the award includes a scholarship in an amount covering tuition. No services are required of students for fellowship or scholarship awards.

Teaching Assistantships

Teaching assistants are resident students in the Graduate School who do part-time teaching as part of their training and are paid. The University has established teaching assistantships to enable distinguished graduate students to gain teaching experience while continuing their studies. Teaching assistants are eligible for other awards, including scholarships and fellowships.

Teaching assistantship appointments are made on the authority of the President of the University by the Dean of the Graduate School who, in turn, acts on the recommendation of a student's department chairman. Appointments are made for periods of one year or one semester, but are renewable. All awards of teaching assistantships to incoming students are conditioned on an interview with a University representative, prior to registration. The University reserves the right to terminate any appointment at any time for due cause. Conduct, character or academic standing that is regarded as undesirable may constitute cause, but the University need not assign any reason for the termination of an appointment at any time. All teaching assistantship appointments are made and accepted with this understanding, and neither the University nor any of its trustees or officers shall be under any liability whatsoever for the summary termination of a teaching assistantship.

Research Assistantships

Research assistantships are available in the science areas. First-year graduate students are not normally eligible for appointment. Application should be made to the chairman of the department or the committee administering the graduate program.

Loans

Guaranteed Student Loan Program (GSLP). A student may be eligible for a guaranteed student loan if he or she meets the following requirements: (1) is accepted for enrollment or is attending Brandeis University and is in good standing as determined by the University; (2) is carrying at least one-half the normal full-time work load; (3) is a citizen or national of the United States or is in the United States for other than a temporary purpose; (4) can demonstrate need. An eligible student may be able to borrow up to \$5,000 in any academic year at a 9% interest rate, and does not have to begin repayment until six months after he/she ceases to be at least a half-time student. The total amount a student may borrow under the Guaranteed Student Loan Program, including both undergraduate and graduate school loans, may not exceed \$25,000. Special Students are normally ineligible for such loans.

Information and applications for this program are available from banks, savings and loan associations and credit unions.

Students who plan to borrow through one of the participating sources must have on file at the Graduate School Office a current Graduate and Professional Student Financial Aid Service form (GAPSFAS). Forms may be obtained at the Graduate School Office or from the Educational Testing Service, Princeton, N.J. 08541

Resident Counselorships

A limited number of positions is available for both married and unmarried men and women as counselors in the University residence halls. Applications may be obtained from the University Housing Office and should be returned no later than March 15. Appointments are made by the Director of University Housing on or about June 1.

Office of Student Employment

The Office of Student Employment assists students who need and desire part-time work. Students seeking part-time work should register with the Office of Student Employment. New students are not assigned part-time work prior to arrival on campus.

The Brandeis Libraries

Last June Brandeis dedicated the new Leonard L. Farber Library, part of an \$8.5 million library building and expansion program. The five-level facility, initiated by a gift from Trustee Leonard L. Farber, dramatically increases space for the University's rapidly growing collections, upgrades and expands the delivery of services to library users, and utilizes the latest technological advances in computerization, miniaturization and audiovisuals equipment.

The new library features a multi-level undergraduate study center that for the first time in University history offers facilities for late night study. The center also includes individual study areas, a lounge, study alcoves and group study rooms. The Norman and Rosita Winston Creative Arts Center contains modern listening facilities and periodicals and books on fine arts and music. The Carl and Ruth Shapiro Center for Library Technology and Journals contains the current periodical collection and the University's extensive microfilm holdings.

The University's library expansion program also features an 18,000 square foot addition to the Goldfarb Library that contains the library's reference and circulation departments. Renovations in Rapaport Treasure Hall have enabled the University to increase its holdings of primary research materials and rare and special collections.

The Farber, Goldfarb and Rapaport buildings have been linked by an expansive plaza that features a foyer area designed in tribute to the University's National Women's Committee, a unique 65,000-member volunteer group that has raised more than \$21 million in support of the Brandeis Libraries since 1948. During that period, the organization has enabled the University's collection to grow from 2,000 volumes to more than 850,000 books and 600,000 microtexts.

Rosenstiel Basic Medical Sciences Research Center

The Dorothy H. and Lewis S. Rosenstiel Basic Medical Sciences Research Center was made possible in 1968 through the gift of the late Lewis S. Rosenstiel, a Brandeis Fellow, as a memorial to his wife, Dorothy. The Center has established research programs in the basic medical sciences embracing work in biochemistry, biology, chemistry, microbiology, physics, biophysics and immunology. Staff members are jointly appointed to the Brandeis faculty basic science departments. The center invites participation of distinguished scholars and medical scientists, offers hospitality to younger researchers at the undergraduate and fellowship level, sponsors symposia and colloquia and underwrites scholarly publications.

The Basic Medical Sciences Research Center contains sophisticated scientific equipment and facilities. Through cooperative programming, both with departments at Brandeis and in the Boston area, the Center has broadened the scope of basic medical science research offerings at Brandeis. Grants from such agencies as the National Science Foundation, National Institutes of Health, and American Cancer Society, among others, support research programs in the Rosenstiel Center.

The Rosenstiel Center sponsors the annual presentation of the Lewis S. Rosenstiel Award, given to recognize distinguished work in basic medical research. Created in 1971 to also honor Mr. Rosenstiel, the award consists of a handsome bronze medallion and a stipend of \$10,000.

The Florence Heller Graduate School for Advanced Studies in Social Welfare

The Heller Graduate School, founded in 1959, is Brandeis' internationally known professional school. It offers a master's degree in Management of Human Services and a doctoral program in Social Policy Analysis. The faculty, which represents a broad spectrum of the social sciences and related professions, conducts a multidisciplinary policy-oriented research program on a wide range of health and welfare issues. Six research centers anchor a variety of projects that involve collaborative activity between faculty members and advanced students. They are: the Center for Health Policy Analysis and Research, which conducts studies in long-term care, health care quality and effectiveness, and regulation and reimbursement; the Levinson Policy Institute, which focuses on the long-term care needs of the elderly and disabled individuals and their families; the Center for Human Resources Policy and Management, which consolidates the research and training activities in the area of employment training and income maintenance as well as develops training programs for employee benefit managers; the Policy Center on Aging, which focuses on major federal and state policies that affect the aged; the National Institute for Sentencing Alternatives, which concentrates on developing new programs for criminal offenders and evaluating the effectiveness of existing programs; and the new Center for the Study of Social Problems in the Middle East, which focuses on the many interrelated social problems of countries in that region including Israel and Egypt. The Heller School also supports major research projects in alcoholism, mental retardation, mental health and children's issues.

Further information is available in the Heller School catalog. Applications may be obtained from the Heller School Office (617) 647-2944.

Office of International Programs

This office serves as the counseling center for students who come here from other countries. It advises students of special social and educational activities and provides assistance in fulfilling the legal procedures required by the U.S. Immigration Service to obtain working permits and documents necessary for extended periods of study, and in other technical matters which may arise (See p.5).

In addition, the office provides the Brandeis community with information on academic opportunities abroad such as Fulbright grants for graduate students and faculty, the Watson Fellowships and Rhodes Scholarships for seniors being graduated, the Abram L. Sachar International Fellowship Program, and the Jacob Hiatt Institute for study in Israel. American students wishing to study abroad on University-accredited programs should consult this office.

Health Services

Because health and medical care are an integral part of the University experience, the University Health Services provides a program of comprehensive medical and emotional care. An optional Health Participation Fee entitles students to medical services available at Mailman House without additional charge during the academic year. The annual health fee does not pay for off-campus medical consultations, dental care, medications, laboratory tests, drugs, x-rays, reusable supplies or admission to the University's hospital, Stoneham Infirmary, and students are responsible for these charges.

In addition, each student is required to have personal health insurance. The student may elect to participate in the Student Health Insurance Plan offered through the University, underwritten by the Boston Mutual Life Insurance Company, or may substitute membership in another plan.

Except for limited day care facilities, the Health Services and the use of the Stoneham Infirmary are available to students only during the period in which the University is in regular academic session.

Prospective students planning to matriculate in the college and graduate schools must submit a Health Examination Report completed by the family or personal physician prior to registration. In addition to information about previous health and details of the physical examination, evidence of immunization against tetanus, polio, measles, mumps and rubella are required. Since students may not register until the requirements have been satisfied, it is strongly recommended that the Health Examination Report be submitted by July 1.

The Student Health Insurance Plan is designed to defray expenses of those situations which are beyond the scope of the Health Services; for example, laboratory and x-ray examinations, as well as hospitalization for illnesses or accidents of a more serious nature. The Plan extends for a full calendar year commencing with the first day of the academic year.

A detailed brochure of the services offered by the University Health Services as well as an outline of the details of the Plan is mailed to students. Students and parents are urged to read this brochure carefully and keep it for reference. This brochure includes a statement of patients' rights in Health Services.

Whereas situations not covered within the Health Services or by the Insurance Plan are infrequent, in awareness of these possibilities will lessen misunderstanding and disappointment.

In such instances, students and their parents are responsible for expenses which are not covered by the University's health program or its associated insurance policy. Similarly, students and their parents are responsible for expenses which are not covered by alternative insurance programs substituted for the Brandeis University Student Health Insurance Plan.

Psychological Counseling Center — Mailman House

The Psychological Counseling Center, a part of the University Health Services, is located in Mailman House. At the Center, a professionally trained staff provides a range of counseling and psychological services designed to enhance personal development of students and to assist those who are experiencing personal or emotional problems. Individual counseling and brief psychotherapy are available both to undergraduate and graduate students; group therapy is also available on a limited basis. Students can make an appointment to see a counselor by applying directly to the Counseling Center office on the second floor of Mailman House.

Academic Schools and Institutes

Crown School of Graduate Studies in American Civilization

The Irving and Rose Crown School of Graduate Studies in American Civilization was established through the generosity of Brandeis Fellows Irving and Rose Crown. Its primary objective is to support gifted students in their work toward a doctorate in the History of American Civilization. Crown Fellowships are granted occasionally to special students on the Brandeis campus from both the United States and abroad who are drawn from important facets of public life including the media and the foreign service.

Danielsen School of Philosophy, Ethics, and Religious Thought

The Albert V. Danielsen School of Philosophy, Ethics, and Religious Thought was made possible through an endowed gift from Brandeis Fellow Albert Danielsen. The School includes the Department of Philosophy, which places traditional emphasis on logic, epistemology, metaphysics, value theory and the history of philosophy. The advancement of philosophical thought in the context of contemporary issues is encouraged through scholarly and interdisciplinary approaches. One of several endowed professorships in the School is the Albert V. Danielsen Chair in Christian Thought.

Fierman School of Chemistry

The Harold and Minnie Fierman School of Chemistry, created through an endowment from the late Brandeis Trustee Harold L. Fierman, incorporates graduate and undergraduate programs, offering highly diverse and advanced research activities as well as lecture programs and colloquia. The school has been aided by grants from the National Institutes of Health, National Science Foundation, Energy and Research Development Administration, Research Corporation, and Petroleum Research Foundation. Research conducted under these agencies has been published in over 700 papers in leading professional journals.

Fisher School of Physics

The Martin Fisher School of Physics, established through an endowed gift from the late University Fellow Martin A. Fisher, encompasses both theoretical and experimental physics on the graduate and undergraduate levels and provides a setting for lectures and colloquia. Scholarship and Fellowship assistance given by Mr. Fisher serves to further enhance Brandeis' teaching and research capabilities. Grants from agencies including the National Science Foundation and the Atomic Energy Commission support research programs in the Fisher School.

Kutz School of Biology

The Milton and Hattie Kutz School of Biology, a gift from the estate of the late Brandeis Fellow Hattie Kutz, embodies the University's undergraduate and graduate biology departments. The curriculum is designed to teach at the molecular and cellular levels, and to present a comprehensive body of courses with special attention to current discoveries and experimentation. Students are encouraged to engage in original research and independent study. A major portion of the governmental, industrial, and private research grants awarded to Brandeis is devoted to varied projects in biology and health sciences.

Lown School of Near Eastern and Judaic Studies

The Philip W. Lown School of Near Eastern and Judaic Studies, created through an endowed gift from the late Brandeis Trustee Emeritus Philip W. Lown, encompasses an intensive teaching and research program in all the main areas of Judaic Studies, the Ancient Near East and the Modern Middle East. In addition, the Lown School has programs which prepare students for Jewish communal service and programs of research in areas of direct concern to the American Jewish community.

The Department of Near Eastern and Judaic Studies is the primary teaching and research unit in the Lown School. In this department the University has assembled an unusual array of distinguished scholars who offer an extremely broad curriculum. A second unit in the Lown School is the Benjamin S. Hornstein Program in Jewish Communal Service which provides graduate education for students interested in professional careers in Jewish communal service and Jewish education. The School also includes the Center for Modern Jewish Studies which is devoted to the study of contemporary Jewish life. The Center currently engages in research and teaching in three major areas: population studies, Jewish identity, and the family.

Swig School of Political Science

The Swig School of Political Science was created through a generous benefaction from the late Brandeis Trustee Emeritus Benjamin H. Swig. Included in the School is the University's Department of Politics which offers a wide range of courses in American government, international relations, theory, methodology, and comparative politics.

Several endowed academic chairs were also established by Mr. Swig. Among these are: the Harry S. Truman Chair in American Civilization; the Earl Warren Chair in American Constitutional Studies; the Christian A. Herter Chair in International Relations; and the Adlai E. Stevenson Chair in International Politics.

The Tauber Institute

The Tauber Institute was established in 1980 under the terms of a gift to Brandeis by Dr. Laszlo N. Tauber of Alexandria, Virginia. It is an independent, multidisciplinary research institute that seeks to set into the context of modern history the causes, nature and consequences of the crisis of European society in the second quarter of the twentieth century with a particular focus on the origins of the European Jewish catastrophe. The Institute undertakes research into broad aspects of modern European intellectual, diplomatic, social, and political history. Among the areas of study with which it is concerned are: nationalism and racialism in modern Europe, European Jewish history since the Enlightenment, refugee problems, and the roots and development of Nazism, fascism, and anti-Semitism. The Institute is engaged in both research and teaching. Its government includes a distinguished Board of Overseers. Distinguished scholars are invited to visit the Institute. It also awards fellowships for advanced doctoral study and for postdoctoral research. Lectures, symposia and conferences are arranged under the auspices of the Institute which initiates and sponsors major research projects.

Areas of Study and Courses — 1983-1984

All courses meet for three hours a week unless the course description indicates otherwise. The presence of "a" in the course number indicates a half course given in the Fall Term; "aA" indicates a full course given in the Fall Term; "b" indicates a half course given in the Spring Term; "bB" indicates a full course given in the Spring Term; "aR" indicates a course given in the Spring Term; "bR," a course given in the Fall Term which is identical with an "a" or "b" course of the same number given in the

Fall and Spring Terms respectively; the use of "c" after a course number indicates that the course is given as a half course but meets throughout the year.

The University reserves the right to make any changes in the offerings without prior notice. Faculty and course listings are accurate as of June 1, 1983.

□ Course not offered for 1983-84.

American Civilization

See History of American Civilization (page 55).

Anthropology

Objectives

The graduate program in anthropology, leading to the degree of Doctor of Philosophy, is designed to produce scholars who will broaden our knowledge of culture and society. Admission is limited to students whose primary interests lie within the fields of social and cultural anthropology or archaeology. Most graduates of the program accept appointments at colleges and universities, although a number take employment in government private institutions or foundations. Intensive training for independent research is stressed, with particular emphasis on comparative studies and fieldwork.

Admission

The general requirements for admission to Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Students need not have an undergraduate major in anthropology or sociology-anthropology. If admitted, however, the student without previous training in anthropology may be required to take additional courses, as determined by the department, to complete his or her residence requirements. Students should have a reading knowledge of one foreign language.

Faculty

Associate Professor
David E. Jacobson,
Chair:
Social anthropology.
anthropology. Sup-
systems. U.S.A. Africa.

Professor
George L. Cowgill:
Mathematical and
computer methods in
archaeology. Meso-
american civilizations.
Origins of early states.
Population
anthropology.

Professor
David Kaplan:
Economics. Method
and theory. Peasant
cultures. Middle
America.

Professor
Marguerite S. Robinson:
Social organization.
Political anthropology.
Rural development.
South and Southeast
Asia.

Visiting Professor
Vivian J. Rohr:
Social anthropology.
Applied anthropology.
Culture and personal-
ity. Legal anthropol-
ogy. North America.

Associate Professor
Robert C. Hunt:
Social anthropology.
Modernization. Irriga-
tion agriculture.
Mesoamerica.

Associate Professor
Judith T. Irvine:
Ethnography of com-
munication. Linguis-
tics. Social stratifica-
tion. Africa.

Associate Professor
Benson Saler:
Comparative religion
and folk philosophies.
Psychological anthro-
pology. Mesoamerica.
South America. Pas-
toral peoples.

Assistant Professor
Marvin Davis:
Social and cultural
anthropology. Politics.
Law. Social stratifica-
tion. South Asia.

Assistant Professor
D. Neil Gomberg:
Physical anthropol-
ogy. Comparative
anatomy. Primate
studies. Human
evolution.

Assistant Professor
Pierre-Yves Jacopin:
Myth and ritual.
Social organization.
Cognitive anthropol-
ogy. Egalitarian soci-
eties. South America.
Europe.

Assistant Professor
Judith F. Zeitlin:
Cultural ecology.
Archaeological
method and theory.
Mesoamerica.

Assistant Professor
Robert N. Zeitlin:
Sociocultural evolu-
tion. Prehistoric
exchange. Pre-state
societies. Archaeologi-
cal method and the-
ory. Mesoamerica.

Research Associates

George N. Appell:
Social anthropology.
Southeast Asia.

Clemency Coggins:
Prehistoric art and
archaeology of
Mesoamerica, lower
Central America and
Peru.

Michael Folsom:
Industrial archaeol-
ogy. New England.

Degree Requirements

Master of Arts

Ordinarily students are admitted for the doctoral program only. However, the Master of Arts degree in anthropology will be awarded to those students who have successfully fulfilled the minimum residence requirements set by the Graduate School and have met the following requirements: 1) Of the eight half-courses to be completed satisfactorily, one must be the first segment of the linguistics sequence, and one must be either of the special graduate courses in archaeology or physical anthropology; 2) If the student will not be continuing toward a Ph.D., he or she must also pass an M.A. qualifying examination, must demonstrate reading proficiency in a foreign language, and must submit an acceptable master's thesis (for doctoral students the Specialist Essay, described below, may substitute for the thesis component in the awarding of an M.A.).

arrangements are in effect. In any case, a maximum of one year of residence credit is allowed by the Graduate School for work completed elsewhere.

At the end of sixteen half-courses students take a General Examination which tests for overall mastery of the subject matter. Upon passing the General Examination, work begins on a Specialist Essay, normally focused on theoretical and/or topical issues of relevance to the forthcoming dissertation. The purpose of the Specialist Essay is to demonstrate a capacity for independent research of high quality. By the end of the third year of study, the essay should be complete, language requirements satisfied, and a proposal for dissertation research drawn up.

Language Requirement.

A reading knowledge of at least one foreign language must be demonstrated by examination and by writing a research paper or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D.

Summer Training Program.

Contingent upon the availability of funding, a program of fieldwork under faculty supervision is carried out during the summer following a student's first year of residence.

Admission to Candidacy.

A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) sixteen half-courses, including all the required courses, 2) a General Examination in anthropology, 3) the reading examination in a foreign language, and 4) the Specialist Essay.

Dissertation Research.

As soon as possible after admission to candidacy, the student should begin at least a full year of research consisting of fieldwork and/or laboratory analysis. In exceptional cases library research may be substituted. This research forms the basis for a doctoral dissertation.

Dissertation and Defense.

The department will recommend to the Dean of the Graduate School that a Ph.D. be awarded the candidate upon formal acceptance of a dissertation and after its successful defense in a Final Oral Examination. Details of the regulations for certifying approval of the dissertation and for the Final Oral Examination are found in earlier pages of this catalog.

Doctor of Philosophy Program of Study.

Flexibility of curriculum enables the student to organize a program of study around his or her particular anthropological interests. At the same time, the doctoral program is structured so that a broad familiarity with other aspects of the discipline is achieved.

At the outset an adviser is assigned each matriculant, but by the end of the second semester of study a student is expected to recruit two members of the faculty for a permanent advisory committee. In soliciting potential committee members, the student should be guided by interest and specialization. Once established, the committee is responsible, through regular meetings and informal consultation, for 1) guiding the student the selection of suitable courses, 2) providing advice in the formulation of a dissertation research project, and 3) supervising the student's progress through the program.

With respect to formal course requirements, all students not exempted by virtue of previous graduate training must complete the four core courses in social organization and anthropological theory, a special one-semester seminar in archaeology, another in physical anthropology, and a two-semester course sequence in anthropological linguistics. Students concentrating in archaeology may substitute the one-semester course for the linguistics (Linguistics 102) requirement. Through course work and outside reading it is expected that students will attain a high degree of scholarly competence in at least one culture area and one topical field study.

The department may, at its discretion, grant a student transfer credit for graduate courses completed with a b grade or better at another accredited institution. Requests for transfer credit will not be considered, however, until at least one semester of study has been completed at Brandeis. Prior approval is not needed for courses taken at Boston College, Boston University and Tufts University, for which formal cross-registration

Anthropology 109b. Archaeological Methods	Basic procedures for the design and implementation of archaeological research. Topics to be covered include: field methods for survey, sampling, site mapping and excavation; techniques of identification, classification, dating and preservation of archaeological materials; principles for interpreting the significance of ancient remains. Weather permitting, several work sessions at a nearby archaeological site will provide some actual field experience.	Anthropology 125b. Investigations in an Unfamiliar Language	□ Not offered 1983-1984.
Mr. Zeitlin		Anthropology 126a. Kinship	□ Not offered 1983-1984.
Anthropology 110b. Introduction to Human Evolution	□ Not offered 1983-1984.	Anthropology 129b. The Evolution of Culture and Society	□ Not offered 1983-1984.
Anthropology 111a. Introduction to Primate Studies	An introduction to the study of non-human primates paying special attention to studies of primates in their natural habitat. Topics focus primarily on the relationships of elements of an animal's feeding, social/maintenance and locomotor behavior to selected aspects of its environment.	Anthropology 131. The Archaeology of Anatolia	See CLORS 122 Mr. Todd.
Mr. Gomberg.		Anthropology 133. Modern Africa	□ Not offered 1983-1984.
Anthropology 112b. Evolution and Natural Selection	□ Not offered 1983-1984.	Anthropology 133b. Anthropological Fieldwork	An introduction to the theory and practice of fieldwork. The course will include discussion of classic and contemporary accounts of doing ethnographic research. Students will conduct supervised fieldwork in Waltham, Cambridge, Boston or other local areas, with the aim of producing an ethnographic case study. Mr. Jacopin
Anthropology 113aR. Human Variation	□ Not offered 1983-1984.	Anthropology 135b. Peoples and Cultures of India	□ Not offered 1983-1984.
Anthropology 115aR. Biocultural Adaptation	An advanced course dealing with human adaptation with particular emphasis on the interaction of elements of the biological and cultural adaptive systems in human societies. Mr. Gomberg	Anthropology 140a. North American Indians Before the Europeans	□ Not offered 1983-1984.
Anthropology 116a. Human Osteology	□ Not offered 1983-1984.	Anthropology 141b. The American Indian	□ Not offered 1983-1984.
Anthropology 120bR. The Anthropology of Law	A comparative study of the relationship between law, society and culture, including the socio-cultural contexts in which various types of legal institutions, procedures, rules and concepts are found and the relationships between the law and change. Ms. Rohrl	Anthropology 142b. Population and Social Change	Relationships between demographic and other sociocultural variables; especially connections between actions at the household level affecting fertility and mortality and their social, cultural, economic and political contexts. Three topics will be emphasized: population problems of the Third World and implications for policies and programs; population changes during the Industrial Revolution; and population changes as consequences and causes of the rise of the first states and of the beginning of strong dependence on food-production. Students may choose which of these topics they will emphasize. Mr. Cowgill
Anthropology 122a. The World Before Civilization	□ Not offered 1983-1984.	Anthropology 143b. Modern Culture of Middle America	□ Not offered 1983-1984.
Anthropology 123aR. Directions and Issues in Archaeology	□ Not offered 1983-1984.		

Anthropology 144a. Indians of South America	□ Not offered 1983-1984.	Anthropology 153a. Primitive Art	This course examines the traditional arts of Africa, Native North America and the Pacific. Graphic and plastic arts are emphasized, but some attention is also given to other aesthetic forms (music, dance and verbal arts). The principal focus is on the relationship between artistic forms and their social and cultural context —e.g., how cosmology affects forms and styles; the artist's position in society; and the uses and settings in which the artistic product is experienced.
Anthropology 146a. Seminar in Mesoamerican Archaeology and Ethnohistory	The topic of this seminar varies from year to year. In 1983-84 it will concentrate on the archaeology of central Mexico, especially Teotihuacan. The course is designed for advanced undergraduates and graduate students. Mr. Cowgill		Ms. Irvine
Anthropology 146a. Environment and Archaeology	An introduction to the major methodological and analytical issues of prehistoric human ecology. The course reviews basic ecological concepts and geological and biological techniques currently used by archaeologists to derive environmental data. In the last few weeks of the semester students will examine selected models of prehistoric ecosystems and ecological processes of culture change in order to evaluate the contribution of this approach to understanding the past. Regular class meetings will include some laboratory sessions. Ms. Zeitlin	Anthropology 154a. Comparative Religion	An explosion of world view and ritual both in "world" or "historical" faiths (such as Buddhism and Islam) and in so-called "primitive" societies with reference to theories concerning the origins and functions of religion. Mr. Saler
Anthropology 147b. Archaeology and Ethnohistory of Mesoamerica	□ Not offered 1983-1984.	Anthropology 154b. Selected Topics in Comparative Religion	Reading and discussion of works by W.R. Smith, E.B. Tylor, William James, Sigmund Freud, Emile Durkheim and Max Weber. Mr. Saler
Anthropology 148a. Rise, Function and Fall of Early Civilizations: Concepts and Explanations	□ Not offered 1983-1984.	Anthropology 155b. Psychological Anthropology	An examination of the relationships between sociocultural systems and individual psychological processes with a critical evaluation of selected theories and studies bearing on this problem. Mr. Saler.
Anthropology 149. Archaeology of the Aegean	See CLORS 119. Mr. Todd	Anthropology 156a. Political Anthropology	□ Not offered 1983-1984.
Anthropology 151a. Social Organization I	□ Not offered 1983-1984.	Anthropology 158a. Urban Anthropology	□ Not offered 1983-1984.
Anthropology 151b. Social Organization II	□ Not offered 1983-1984.	Anthropology 158b. Selected Topics in Urban Anthropology	□ Not offered 1983-1984.
Anthropology 152bR. Comparative Political Economy	This course will compare and contrast the political economy of pre-industrial societies with that of industrial societies and will be especially concerned with the transition from the former to the latter. Although some attention will be paid to primitive societies, emphasis will be on peasant economies. Marxist, formalist and substantive approaches to political economy will be contrasted. Mr. Kaplan	Anthropology 161b. Culture and Cognition	What relationship is there between cognitive processes and cultural systems? Do cultural differences involve or affect people's perception, classification process, memory or modes of problem-solving? Do they affect the course of cognitive development? This course will examine cross-cultural research in psychology and anthropology that attempts to answer these questions. Special attention will be given to the role of language, to the relation between magic and science, and the cognitive effects of literacy. Ms. Irvine

Anthropology 162a. Anthropology and Psychoanalysis	□ Not offered 1983-1984.	Anthropology 186. Mathematics and Computers in Archaeological Data Analysis	A year long graduate lecture and laboratory course on the uses of mathematics, statistics and computer technology in the management and analysis of archaeological data. Topics include file processing, simple programming, statistical packages, basic descriptive statistics, research design and sampling, classification, seriation, spatial analysis, introductions to multivariate methods and to simulation, and uses and misuses of all these approaches for archaeological interpretation and theory building. Preference given to students with some background in computers, statistics, and/or college mathematics.
Anthropology 165aR. Modernization and Social Change	Exploration of selected problems and processes of modernization with reference to both the "developed" and the "underdeveloped" states and the relationships between them. Ms. Robinson		
Anthropology 166a. The Nature of Human Nature	This course will deal with various theories of human nature and the evidence for such theories. It will explore the way in which theories of the nature of man have figured in interpretations of culture. The course addresses the question: to what extent is culture the expression of nature and to what extent does it depart from nature? Mr. Kaplan		Mr. Cowgill
Anthropology 170aR. Peasant Cultures: Past and Present	Comparative and historical study of peasantry, with emphasis on the relationship among city, rural community and the state. Mr. Kaplan	Anthropology 188. Materials in Ancient Societies	A major focus of both seminar and laboratory is the way in which scientific analysis of archaeological artifacts and monuments can contribute to our understanding of the cultures that produced them. The metals seminar topics will include ore formation and extraction, principles of smelting and refining, slags, alloys and techniques of manipulating metal into desired forms. Examples of ancient or ethnographically reported metal production and use will be related to the social setting in which these activities occurred. The laboratory sessions will involve primarily metallographic examination and analysis of excavated metal artifacts or of ethnographic materials that present particularly interesting technological or cultural problems. A minimum of six hours of laboratory work is required each week. Mr. Cowgill, Brandeis Coordinator
Anthropology 171a. The Comparative Method	□ Not offered 1983-1984.	Anthropology 190a. Comparative Social Stratification	□ Not offered 1983-1984.
Anthropology 175a. Pro-Seminar in Anthropological Theory	Analysis of representative classics in anthropology. Mr. Jacopin	Anthropology 193b. Research Design	□ Not offered 1983-1984.
Anthropology 175b. Pro-Seminar in Method in Cultural Anthropology	The development of anthropological theory, major present-day trends and their relation to problems of research. Mr. Kaplan	Anthropology 198a. Waltham Community Studies Seminar	Mr. Folsom
Anthropology 177b. Archaeological Method and Theory	□ Not offered 1983-1984.	Anthropology 198b. Waltham Community Studies Seminar	Mr. Folsom
Anthropology 180b. Historical Anthropology	□ Not offered 1983-1984.	Primarily for Graduate Students	
		Anthropology 210a. Seminar on Conflict Resolution in Peasant Societies	□ Not offered 1983-1984.
		Anthropology 210b. Special Topics in Anthropological Analysis	□ Not offered 1983-1984.

Anthropology 226-254. Readings and Research Courses		245a and b. Readings and Research in Physical Anthropology	Mr. Gomberg
226a and b. Readings and Research in Archaeology	Staff	253a and b. Readings and Research in Eco- nomic Anthropology	Mr. Kaplan
227a and b. Readings and Research in Linguistics	Ms. Irvine	254a and b. Readings and Research in Sou- theast Asian Ethnography	Mr. Appell
228a and b. Readings and Research in Method and Theory	Mr. Kaplan	Anthropology 300a and b. Seminar in Anthro- pological Field Work	
229a and b. Guided Comparative and Historical Research	□ Not offered 1983-1984.	Anthropology 302. Summer Research Training	Field work for three months during the summer under the supervision of a member of the staff. Staff
230a and b. Readings and Research on Culture of Hunters and Gatherers	Mr. Jacopin	Anthropology 304a and b. Readings and Research in Anthro- pological Field Methods	Staff
231a and b. Readings in Cognitive Culture	Mr. Saler	Anthropology 305. Anthropology Colloquium	Staff
232a and b. Readings in Law	Staff	Anthropology 400-412. Dissertation Research	Independent research for the Ph.D. degree 401. Mr. Cowgill 408. Ms. Robinson 402. Mr. Jacobson 409. Mr. Saler 403. Mr. Hunt 411. Ms. J. Zeitlin 404. Mr. Gomberg 412. Mr. R. Zeitlin 405. Ms. Irvine 413. Mr. Gomberg 407. Mr. Kaplan 414. Mr. Jacopin
235a and b. Readings and Research in Latin American Cultures	□ Not offered 1983-1984.		
236a and b. Readings and Research on East and South Asia	Ms. Robinson		
237a and b. Readings and Research in African Cultures	Ms. Irvine		
238a and b. Readings and Research in Urban Anthropology	Mr. Jacobson		
239a and b. Readings and Research in North American Indians	Staff		
240a and b. Readings and Research in Medical Anthropology	Mr. Jacobson		
241a and b. Readings and Research in New World Ethnohistory	Ms. J. Zeitlin		

Biochemistry

Objectives

The graduate program in biochemistry leading to the degree of Doctor of Philosophy is designed to equip students with a broad understanding of the chemistry involved in biological processes and to train them to carry out independent original research. Although students will be primarily responsible for a comprehensive understanding of biochemical phenomena, they will be encouraged to acquaint themselves with the disciplines of biology and chemistry. Research and experimental projects rather than formal course training will be emphasized. The student will, however, be requested to take courses in advanced biochemistry, physical biochemistry, biochemical techniques, molecular biology and biochemistry seminars, as well as one advanced course in chemistry or biology. The choice of advanced biochemistry courses and those of other scientific disciplines (i.e., organic chemistry, genetics, embryology, etc.) are subject to the student's particular interests. The choice of research programs should be in areas under investigation by the faculty; some of these fields include metabolic regulation in normal and also tumor tissues, enzymology, immunochemistry, molecular biology, molecular pharmacology, biochemical genetics, bacterial and phage genetics, physical chemistry of macromolecules, protein chemistry, plant and virus metabolism, problems in growth and differentiation, microbial metabolism, organic biochemistry, membrane transport and energy coupling mechanisms, application of NMR to biochemical problems, biochemistry of muscle, and chromosome structure.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the Biochemistry Department are also required to take the Graduate Record Examination. It is strongly suggested that the applicant take one of the advanced sections (preferably chemistry or biology) of this examination. The student's undergraduate curriculum should include some fundamental courses in biology and chemistry which will be subject to final staff approval.

Faculty

Professor
Robert H. Abeles,
Chair:
Mechanism of enzyme action. Design of highly specific enzyme inactivators. Design of inhibitors with potential pharmacological significance. Mechanism of drug action.

Professor
Gerald D. Fasman:
Conformation of biological macromolecules. Chromatin structure, protein-DNA interactions. Protein models; synthesis and conformational studies of polyamino acids.

Professor
Thomas C. Hollocher, Jr.:
Role and mechanism of action of oxidation-reduction enzymes.

Mechanism, enzymology and pathway of nitrogen in denitrification and nitrification.

Professor
William P. Jencks:
Mechanisms of reactions catalyzed by enzymes, coenzymes, and by chemical catalysts. Mechanisms, catalysis and equilibria of reactions of "energy-rich" compounds of importance in biochemistry and chemistry. Mechanisms of conversion of chemical energy into osmotic and mechanical work.

Professor
Lawrence Levine:
Immunochemistry. Antibodies as analytical reagents for measuring pharmacologically important molecules.

Mechanisms of arachidonic acid metabolism by cells in culture.

Professor
John M. Lowenstein:
Role of phospholipids in hormone action. Regulation of metabolic pathways. Regulation and function of the purine nucleotide cycle; regulation of adenosine production in heart.

Professor
Susan Lowey:
Structure and function of myofibrillar proteins and their relation to the muscle cell. Techniques will include physical chemistry, protein chemistry, fluorescence and electron microscopy.

Professor
Alfred G. Redfield:
Magnetic resonance in biopolymers. Physical biochemistry.

Professor
Robert F. Schleif:
Molecular genetics. Mechanism of gene regulation as studied by genetic, physiological and physical chemical means.

Professor
Serge N. Timasheff:
Physical chemistry of proteins, in particular, structure in solution and self-associations; self-assembling systems; ligand-mediated interactions; macromolecular properties of biological polymers.

Professor
Helen Van Vunakis:
Interaction of hallucinogenic, narcotic and carcinogenic compounds with specific antibodies and natural receptors. Nicotine metabolism and physiological effects.

Associate Professor
Irwin B. Levitan:
Neurobiology. Neurobiochemistry. Regulation of neuronal membrane properties.

Associate Professor
Christopher Miller:
Cellular physiology and biophysics. Membrane transport and mechanisms of electrical excitation.

Associate Professor
William T. Murakami:
Biochemistry of virus infection. Metabolism of virus-infected cells. Purification and characterization of polyoma viruses.

Associate Professor
Pieter Wensink:
Molecular biology. Gene expression during development of higher organisms. The physical arrangement of genes within the DNA and the chromosomes of higher organisms.

Assistant Professor
Michael Wormington:
Molecular biology. Developmental regulation of eukaryotic gene expression. Control of mitochondrial transcription.

Degree Requirements

Doctor of Philosophy Program of Study.

Each doctoral candidate must satisfactorily complete the following fundamental courses: advanced biochemistry, biochemical techniques, physical biochemistry and biochemical research problems, and four of the biochemistry seminars.

Financial Support.

Graduate students currently receive financial support for a period of four years. Support for the fifth year or beyond is arranged with the research supervisor. The initial four-year support is contingent upon teaching for a maximum of two semesters. Teaching does not require laboratory supervision.

Language Requirements.

There is no foreign language requirement for the Ph.D. degree.

Qualifying Examinations.

An oral qualifying examination must be taken generally at the beginning of the second year. In this examination, the student will be asked to defend or refute two propositions. One proposition will be assigned in an area of research outside the student's immediate area of specialization, and one will be an original proposition put forth by the student for a research problem in his or her area of interest (this is not necessarily a problem upon which he or she will carry out research).

Admission to Candidacy.

In addition, the student will have an opportunity to demonstrate general knowledge of biochemistry in a series of three area examinations: physical biochemistry and macromolecules, metabolism and enzymology, and molecular biology. Students are expected to have taken three examinations by the end of the third year; two of these must be taken by the end of the second year. This general knowledge outside the student's own field of specialization must be demonstrated to the satisfaction of an advisory committee of four Department faculty members.

At this time it will be decided whether a student will continue working towards the Ph.D. degree or a Master of Arts degree.

At some time before the second semester of their third year, students will present to a committee of four members of the Department a summary of their research accomplished to date, including the most significant experimental data and detailed plans for the completion of a research project. The committee will recommend whether the research project should be continued as a partial fulfillment of the requirements for the Doctor of Philosophy degree. After completion of the research report and the three area examinations at a level satisfactory for the Ph.D. degree, the student will be admitted to candidacy.

Dissertation and Defense.

A dissertation will be required which summarizes the results of an original investigation of an approved subject and which demonstrates the competence of the candidate in independent research.

Courses of Instruction

Biochemistry 100aR. Introduction to Biochemistry	Chemistry, reaction and metabolism of biologically important compounds. Formation and utilization of "energy-rich" compounds. Introduction to enzyme mechanisms. An attempt will be made to interrelate and compare basic biochemical and chemical processes. Metabolic regulation. Prerequisite: Chemistry 25a and b. Section 1: Mr. Hollocher Section 2: Mr. Lowenstein	Biochemistry 104b. Introduction to Physical Biochemistry	Discussion of physical methods; molecular interactions; solvent effects; principles of folding; structural and conformation analyses by various spectroscopic and x-ray techniques. Messrs. Timasheff and Fasman
Biochemistry 100aR. Introductory Biochemistry	See Biochemistry 100a. Mr. Murakami and Ms. Lowey	Biochemistry 105b. Eukaryotic Molecular Biology	The structure and control of eukaryotic genes and their products. Experimental support for current views of control will be emphasized. Research papers will be discussed. Messrs. Fulton, Wensink, and Wormington
Biochemistry 101a and b. Advanced Biochemistry	A discussion of enzyme reactions including energetics, kinetics, and reaction mechanism. Metabolism of carbohydrates, lipids, amino acids, nucleic acids, vitamins and coenzymes, hormones, and inorganic substances. Coupled enzyme reactions, such as oxidative phosphorylation, and the synthesis of macromolecules such as glycogen, protein and the nucleic acids. Regulated enzymes and regulation of metabolism. Prerequisite: Chemistry 25a and b, Biochemistry 100a or their equivalent. Messrs. Abeles, Jencks, Hollocher and Lowenstein	Biochemistry 200. Biochemistry Techniques	Prerequisite: Biochemistry 101. May be taken concurrently. Mr. Jencks and Staff
Biochemistry 102b. Structural Biochemistry	This course will explore how complex biological molecules work in terms of their detailed atomic structure. We will analyze the special designs and motions of proteins, nucleic acids and lipid molecules and discuss how they are organized in higher level cellular structures such as virus particles, chromosomes, muscle filaments and membranes. Important approaches to this material will include both experimental methods (such as X-ray crystallography and electron microscopy) and conceptual tools for solving structural problems. An intermediate level course suitable for first-year graduate students and qualified undergraduates. Ms. Cohen	Biochemistry 202b. Chemistry of Enzyme-Catalyzed Reactions	This course will deal with reaction mechanisms and mechanisms of catalysis in aqueous solution, some of which are relevant to enzymic catalysis. Mr. Jencks
Biochemistry 103a. Advanced Molecular Biology	The fundamental principles of molecular biology will be stressed with respect to nucleic acid biosynthesis, structure, and physiological involvement. In addition, a description of events dealing with control of genetic information will be outlined. Mr. Schleif	Seminars	One or two seminars will be given each semester. Each student will present an oral and written report on one aspect of the following topics
		Biochemistry 217b. Cell Motility	Ms. Lowey
		Biochemistry 220a. Transmission and Neuronal Modulation	Mr. Levitan
		Biochemistry 231a. Immunology	Messrs. Murakami and Levine
		Biochemistry 401-419. Biochemical Research Problems	Independent research for the Ph.D. degree. +01. Mr. Jencks +11. Ms. Van Vunakis +02. Mr. Levine +13. Mr. Hollocher +04. Mr. Timasheff +14. Mr. Murakami +05. Mr. Abeles +15. Mr. Schleif +06. Mr. Fasman +16. Mr. Redfield +07. Mr. Lowenstein +17. Mr. Wormington +08. Mr. Wensink +18. Mr. Miller +09. Ms. Lowey +19. Mr. Levitan

Journal Club, Colloquia, and Research Clubs

In addition to the formal courses announced above, all graduate students are encouraged to participate in the Department's Journal Club and colloquia. The Journal Club is an informal meeting of the students, staff and post-doctoral fellows, at which recent publications are discussed. Colloquia are general meetings of the Department in which both speakers from the Department and guest speakers will present their current investigations. Research clubs are organized by various research groups of the Department.

Biology

Objectives

The graduate program in biology is designed to encourage and train students to develop their abilities to carry out independent and original research. Each student is expected to become familiar with the major areas of research currently being conducted within the department: molecular genetics and development, neurobiology, immunology, and cell and structural biology. In addition to a flexible curriculum of courses, designed for each student's specific program, entering students begin a series of laboratory rotations to acquaint themselves with current research techniques and to explore possible areas of thesis research. Students also are given opportunities to develop their confidence and ability to make oral presentations, beginning in the first year with a proseminar designed to discuss research methodology and continuing through a series of journal clubs. Each advanced student also presents an annual summary of his or her own research to the department. Research leading to a Ph.D. degree is carried out under the direction of one of the 19 members of the biology faculty. Areas of research include: molecular biology of the regulation of gene expression, especially during development; chromosome structure and chromosomal rearrangements; developmental genetics; behavior genetics and neural development; biophysics of single nerve cells; integration of neural function; immunogenetics; immune cell differentiation and development; molecular biology of the immune system; regulation of muscle contraction; molecular and cell architecture; organization of subcellular structures. A complete list of faculty research interests is available from the Department of Biology.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology at this institution. These are: general biology, genetics, cell physiology, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects, but whose records are otherwise superior, may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

It is strongly recommended that applicants take the Graduate Record Examination.

On being admitted to the Biology Department, graduate students will report to the temporary graduate student advisor who will assist the student with formal entry into the department and later with their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroken by courses and other responsibilities, it is customary for graduate students to spend their summers doing research. In recognition of this, the Biology Department provides summer stipends for its full-time graduate students.

Faculty

Professor
Chandler M. Fulton,
Chair:
Cell differentiation and selective gene expression in eucaryotic cells. Morphogenesis of cell shape and of cell organelles, especially flagella.

Professor
Carolyn Cohen
(**Rosenstiel Center**):
Structure and function of protein assemblies in cells. X-ray diffraction and electron microscopy applied to muscle contraction, cell division, and blood coagulation.

Professor
David J. DeRosier
(**Rosenstiel Center**):
Structural molecular biology. X-ray crystallography.

Professor
Herman T. Epstein:
Developmental changes in the brain in relation to learning in man and mouse.

Professor
Martin Gibbs
(**Photobiology Institute**):
Photosynthesis and plant physiology.

Harlyn O. Halvorson
(**Director, Rosenstiel Center**):
Developmental changes in microrganisms. Control of macromolecular synthesis during the cell cycle and during sporulation in bacillus.

Professor
Attila O. Klein
Regulation of development in higher plants by light. Control of growth, organellar development and macromolecular synthesis in the leaf.

Alfred Nosenoff
(**Rosenstiel Center**):
Immunochemistry. Genetic control of the immune response.

Professor
Jerome A. Schiff
(**Director, Photobiology Institute**):
Plant biochemistry and physiology. Photocontrol of intracellular development. Sulphur metabolism.

Professor

Andrew G. Szent-Gyorgyi:
Mechanism of muscle contraction. Regulation of contractile proteins in both primitive and more advanced animals.

Associate Professor James E. Haber (Rosenstiel Center): Control of meiosis sporulation-specific events in the yeast <i>Saccharomyces cerevisiae</i> . Genetic and biochemical studies of macromolecular synthesis, especially during development.	Associate Professor Jeffrey C. Hall: Genetic and histochemical mosaic analysis of behavior mutants of <i>Drosophila melanogaster</i> . Associate Professor John E. Lisman: Mechanisms of excitation and adaptation in photoreceptors.	Associate Professor Joan L. Press (Rosenstiel Center): Developmental immunology. Associate Professor Michael Rosbash: Gene organization in eucaryotes. Macromolecular synthesis during oogenesis.	Assistant Professor Kathleen M. Karrer: Molecular analysis of germ line development. Assistant Professor Eve E. Marder: Neurotransmitter-receptor interactions, using a combination of physiological, pharmacological and biochemical approaches.	Assistant Professor Eric Selsing: Immunology. Adjunct Assistant Professor Judith E. Tsipis: Virology. Assistant Professor Lawrence J. Wangh: Control of gene activity, purification of estrogen receptors and Vitellogenin synthesis.	Assistant Professor Kalpana P. White: Developmental neurobiology.
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Degree Requirements

	At least one year of teaching experience (or equivalent) is required of all degree candidates.	
Master of Arts	The goal of the Biology Department is to train students in original research on the level of the Ph.D. Only rarely do we accept candidates for a master's degree.	Doctor of Philosophy
Program of Study.	The program leading to the M.A. degree in Biology requires course work and a research thesis. The student's program will be set up by the Graduate Committee of the department. The candidate must complete the equivalent of one full year of graduate study at Brandeis University, normally computed at a minimum of eight half-courses of approved study which include research courses. The candidate must pass the prescribed courses and submit an acceptable thesis.	Program of Study. All students will be expected to obtain a knowledge of the principles and techniques of the five areas represented in the department, i.e., genetics, developmental biology, neurobiology, immunology and cell biology, before taking the qualifying examination. The background a student is expected to have in these areas will be covered in courses given by the department. Entering students will be encouraged to do research rotations in at least two different laboratories. The student will be expected also to have additional background in his or her area of specialization as well as experience in seminar and research courses to be designated.
Language requirements.	There is no foreign language requirement for the master's degree.	Each student will choose his or her specific field of interest and will apply for a permanent adviser to be agreed upon by the department before the end of the second year. The adviser will assist the student in planning a well-balanced program in his or her specific field of interest. In addition, the adviser will ordinarily serve as the chairman of the student's dissertation examining committee.
		Language Requirement. There is no foreign language requirement for the Ph.D. degree.
		Qualifying Examination. Ordinarily this examination is taken in the middle of the second year of study. Subsequent to the written portion of the examination, a proposition committee is formed and the student must submit and defend two propositions from two areas. The student will be examined orally on the two propositions by the three members of the proposition committee.
		Admission to Candidacy. To be admitted to candidacy, the student must have (a) passed the qualifying examination, (b) been accepted by a graduate adviser.
		Dissertation and Defense. Each student will conduct an original investigation. With the approval of the student's adviser, however, research courses may be elected at any time. After submission of the dissertation, the candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation.

Courses of Instruction

Biology 100a. Photobiology of Cells and Organelles	See Photobiology 100a. Messrs. Gibbs, Schiff and Staff
Biology 101a. The Electron Microscope	One of the most powerful instruments in modern research is the electron microscope. With it, scientists can examine the outer surface of a whole beetle, the inner workings of cells, and can even see single atoms. Find out how the machine works, how it is used, and what it is used for. Mr. DeRosier
Biology 102b. Structural Biology	This course will explore how complex biological molecules work in terms of their detailed atomic structure. We will analyze the special designs and motions of proteins, nucleic acids and lipid molecules and discuss how they are organized in higher level cellular structures such as virus particles, chromosomes, muscle filaments and membranes. Important approaches to this material will include both experimental methods (such as X-ray crystallography and electron microscopy) and conceptual tools for solving structural problems. An intermediate course suitable for first-year graduate students and qualified undergraduates. Ms. Cohen
Biology 105b. Eukaryotic Molecular Biology	The structure and control of eukaryotic genes and their products. Experimental support for current views of control will be emphasized. Research papers will be discussed. Messr. Fulton, Wensink, and Wormington
Biology 121aR. Advanced Genetics	A deeper and more detailed discussion of topics introduced in Biology 21. Two basic approaches will be emphasized: cytogenetics and molecular genetics. Problems currently under investigation will be discussed. <i>Prerequisite:</i> Biology 21 and 31. Mr. Hall
Biology 122a. Advanced Genetics	Mr. Haber
Biology 124bR. Animal Virology	A series of lectures and readings, with student participation, on some aspect of animal virology. Topics to be covered are: techniques and inhibitors used in virology; survey of replication of some of the animal viruses; brief discussion of medical aspects of virology. Ms. Tsipis

Biology 142a. Neurobiology

The course is designed as an introduction to the field of neurobiology. Original papers and a textbook will provide readings. Topics to be covered will include membrane electrophysiology, synaptic transmission, sensory processing, generation of motor patterns and neuronal plasticity. For graduate students with little or no previous course work.

Mr. Lisman

Biology 175b. Advanced Immunobiology

□ Not offered 1983-1984.

Biology 200a. Proseminar: Behavioral Genetics

Ms. Cohen, Messrs. DeRosier and Szent-Gyorgyi

Biology 245a. Selected Topics in Plant Metabolism

See Photobiology 245a.

Mr. Gibbs

Biology 245b. Comparative Physiology and Biochemistry of Plants

See Photobiology 245b.

Mr. Schiff

Courses in Research

Biology 300a and b. Biological Research

Primarily for the first year student with the purpose of introducing him or her to biological research and to the work in progress in the laboratories of a number of faculty members. In consultation with the graduate adviser, the student plans a sequence of such tenures, each comprising six weeks or more, and then carries out experimental investigations under the guidance of the faculty members involved.

Staff

Biology 400. Biophysics of Microorganisms

Mr. Epstein

Biology 402. Molecular Biology of Microorganisms

Mr. Halvorson

Biology 403. Immunochemistry: Genetic Control of the Immune Response

Mr. Nisonoff

Biology 404. Developmental Neurobiology

Ms. White

27	Biology		
Biology 405. Cell Differentiation and Morphogenesis	Mr. Fulton	Biology 413. General Physiology	Mr. Szent-Gyorgyi
Biology 406. Neurophysiology	Ms. Marder	Biology 414. Gene Organization Eukaryotes, Macro- molecular Synthesis During Oogenesis	Mr. Rosbash
Biology 407. Structural Biochemistry	Ms. Cohen	Biology 415. Biochemistry and Genetics of Differentiation	Mr. Haber
Biology 408. Behavioral Genetics	Mr. Hall	Biology 416. Molecular Analysis Germ Line Development	Ms. Karrer
Biology 409. Biophysics of Visual Transduction	Mr. Lisman	Biology 418. Developmental Immunology	Ms. Press
Biology 410. Plant Development	Mr. Klein	Biology 419. Immunology	Mr. Selsing
Biology 411. Gene Control in Vitellogenin	Mr. Wangh	Biology Journal There will be a number of informal Journal Clubs which deal with various topics of concern to the various specialties. These will meet	
Biology 412. Structural Molecular Biology	Mr. DeRosier		

Institute for Photobiology of Cells and Organelles

Objectives

The graduate program of the Institute is designed to give students an understanding of the photobiology of cells and organelles as part of the fundamental nature of living processes, and to train them to undertake original research in these areas.

The Institute rarely admits a graduate student who desires a master's degree. Such candidates may, however, be admitted at the discretion of the faculty as exceptional cases. A Master of Arts degree may be granted on completion of a designated program to be arrived at after consultation with the graduate adviser.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology or biochemistry at this institution. These are: general biology, genetics, cell physiology and biochemistry, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects but whose records are otherwise superior may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

It is strongly recommended that applicants take the Graduate Record Examination.

On being admitted to the Institute, graduate students will be advised and aided in planning their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroken by courses and other responsibilities, it is customary for graduate students to spend their summers doing research.

Faculty

Professor
Jerome A. Schiff,
Director:
Plant biochemistry
and physiology.
Photo-control of
intracellular develop-
ment. Sulphur
metabolism.

Professor
Martin Gibbs:
Photosynthesis and
plant physiology.

Degree Requirements

At least one year of teaching experience is required of all degree candidates.

Master of Arts

Program of Study.

The program leading to the M.A. in biology focuses primarily on the research capability of the student. Specifically, the primary requirement for the degree is the completion of a thesis based on original laboratory work which is acceptable to the Institute. In general, the preparation for an original research problem will necessitate the enrollment of a student in course work. The specific number and types of courses will vary, depending on the ultimate research problem, and will be prescribed by

the Institute. The candidate must, however, complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight half-courses of approved study.

By the end of the first year, each graduate student will choose a specific field of interest and will apply to the Director of the Institute for a permanent adviser to be assigned by the Institute. This adviser will serve as the chairman of a committee which will advise the student on courses to be taken and guide him or her throughout the thesis problem.

There is no foreign language requirement for the master's degree.

At the discretion of the student's advisory committee, a qualifying or comprehensive examination may be required.

Language
Requirement.

Qualifying
Examination.

Doctor of Philosophy

Program of Study.	All students are expected to obtain a knowledge of the principles and techniques of the areas of: biochemistry and physiology (with emphasis on metabolism); genetics, regulation, DNA and repair; development; photobiology and molecular structure, structure in relation to function, photochemistry, microbiology and evolution (the five proposition areas of the qualifying examination). Proficiency in those areas of chemistry and physics related to photobiology is also expected. This knowledge will be acquired during the first two years through courses, seminars, reading, research rotations, etc. in preparation for the qualifying examination.
Language Requirements.	There is no foreign language requirement for the Ph.D. degree.
Research Rotation.	Students may rotate to any laboratory in the Institute on acceptance by the professor involved. A student should stay long enough on each rotation to complete a piece of research and to learn the techniques involved. Research rotations will ordinarily be completed during the first year. When the student completes his or her rotations, he or she petitions the Institute, with the consent of the professor concerned, to have a permanent adviser appointed. When the permanent adviser has been approved, this adviser will sign program cards for the student, advise him or her on courses, convene

Qualifying Examination.

the proposition and examining committees, supervise the thesis and ultimately convene the thesis examining committee which is the final examination for the Ph.D. degree.

Ordinarily this examination should be completed before the active dissertation work is initiated. The student's adviser will appoint, with the consent of the Institute, two other faculty members to serve with him or her in the five core areas mentioned above with no more than one proposition in any one area. Each proposition should be a proposal or hypothesis subject to debate. The proper form in which the propositions are to be submitted will be designed by the Institute. The student will be examined orally on at least three of the acceptable propositions by the three members of the propositions committee plus additional faculty members as needed.

Admission to Candidacy.

To be admitted to candidacy, the student must have (a) passed the qualifying examination, (b) shown a capacity for independent research, (c) been accepted by a graduate adviser.

Dissertation and Defense.

Each student will conduct an original investigation. After admission to candidacy, a dissertation committee will be appointed by the Director of the Institute. It will consist of at least three staff members headed by the student's permanent adviser. This committee will guide his or her research activities toward the doctoral dissertation, and will read and evaluate the completed dissertation. The candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation.

Courses of Instruction

Photobiology 100a. Photobiology of Cells and Organelles	Basic photobiology including an introduction to the physical and chemical concepts involved, the influence of the changing solar spectrum on the course of evolution, the catalytic uses of light by living systems including photoperception (phototropism, phototaxis and the evolution of visual systems), photomorphogenesis (blue light and re-far red systems), photoinduced rhythms, and other biological responses to light, energy storage including the photosynthetic apparatus, membranes and reaction centers, photosynthetic electron transport and phosphorylation, photosynthetic carbon metabolism and photoreduction, utilization of assimilatory power in reductive reactions, the deleterious effects of light including photodynamic action, photoprotection, erythral effects, ultraviolet damage to the genetic material and its photorepair and the evolution of repair systems and medical applications. Prerequisites: Cell biology or its equivalent. Permission of the instructor.
	Messrs. Gibbs, Schiff and Staff

Photobiology 245a. Selected Topics in Plant Metabolism	A discussion of those areas of physiology and biochemistry to which plants lend themselves as experimental objects. Conspicuous examples are photosynthesis, photomorphogenesis,
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nitrogen fixation, and the biosynthesis of natural products such as anthocyanins, flavonoids, isoprenoids, phenols, terpenes, etc.
Prerequisite: Permission of the instructor.

Mr. Gibbs

Photobiology 245b. **Comparative Physiology and Biochemistry of Plants**

A continuation of Photobiology 245a.
Prerequisite: Permission of the instructor.

Mr. Schiff

Photobiology 406. **Photobiology and Plant Physiology**

Mr. Schiff

Photobiology 412. **Photobiochemistry and Plant Metabolism**

Mr. Gibbs

Institute Journal Clubs

There will be a number of informal Journal Clubs which deal with various topics of concern to the various specialties. These will meet regularly under the auspices of the staff. Students, depending upon their individual needs, may be required to attend.

Biophysics

Objectives

The interdepartmental graduate program in biophysics, leading to the degree of Doctor of Philosophy, is designed to provide a broad background in the physics and chemistry of living processes and to develop the students' capacity for independent research. The program offers opportunity for study and research in biophysical chemistry, cellular physiology, molecular genetics, photobiology, psychophysics and structural biology. Applicants are expected to have strong backgrounds in physical science with undergraduate concentrations in biology, chemistry, mathematics, physics or engineering.

Admission

The general requirements for admission to the Graduate School are given in an earlier section of this catalog. Applications should include, in addition to letters of reference, a personal statement giving reasons for choosing biophysics and indicating areas of interest. Applicants are required to take the Graduate Record Examination and are encouraged to visit Brandeis for interviews, if possible.

Faculty Advisory Committee

Professor
Christopher Miller
(Biochemistry),
Chair:

Professor
Donald Caspar
(Physics)

Professor
David J. DeRosier
(Biology)

Professor
Alfred G. Redfield
(Physics and
Biochemistry)

The faculty of the Biophysics Program is composed of members of the Biochemistry, Biology, Chemistry and Physics departments. About twenty faculty members participate in this graduate program.

Professor
Carolyn Cohen
(Biology)

Degree Requirements

Doctor of Philosophy

Program of Study.

Since Biophysics is very a broad field and students may have widely different backgrounds and goals, the course of study is flexible. During the first year students take Biophysics 300, a course in which students meet with selected faculty members to explore areas of research. Students are also required to successfully complete Biophysics 200b. In addition, students generally complete the following courses: Advanced Biochemistry (Biochemistry 101a), Introduction to Physical Biochemistry (Biophysics 104b), Structural Biology (Biophysics 102b) and Biophysical Optics (Biophysics 101a). Courses to complete the student's program will depend on the student's background and interests. The additional courses may be in the areas of biochemistry, biology, biophysics, chemistry, mathematics, photobiology or physics.

Language Requirements.

Reading knowledge of one foreign language, chosen from French, German or Russian. A knowledge of computer programming may be substituted.

Admission to Candidacy.

Students are admitted to candidacy on the basis of academic performance and on research proposals that they develop and defend, generally during the second year of study. Students must pass Biophysics 200b in order to qualify for admission to candidacy.

Dissertation and Defense.

Each doctoral candidate will submit a dissertation describing his or her research and will be required to defend it in a Final Oral Examination.

Courses of Instruction

Biophysics 100a
**Photobiology of
Cells and Organelles** See Photobiology 100a.
Messrs. Gibbs, Schiff and Staff

Biophysics 101a.
**The Electron
Microscope** See Biology 101a.
Mr. DeRosier

Biophysics 102b.
**Structural
Biochemistry** See Biology 102b.
Ms. Cohen

Biophysics 104b.
**Introduction to
Physical
Biochemistry** See Biochemistry 104b.
Messrs. Timasheff and Fasman

Biophysics 142a.
Neurobiology See Biology 142a.
Mr. Lisman

Biophysics 152bR.
Biological Assembly Physical principles in the construction of biological structures; equilibria, symmetry and control mechanisms. Analysis of the structure and assembly of viruses, membranes and cellular organelles.
Mr. Caspar

Biophysics 200b. Seminar in Biophysical Research

A required seminar for Biophysics majors which will deal with current biophysical research. Emphasis is on the understanding, critical evaluation and use of scientific literature. Students will discuss topics from the areas of biophysical chemistry, cellular physiology, molecular genetics, photobiology, and structural biology, based on the reading of significant articles. In consultation with the faculty, each student will develop a research proposition based on independent reading and will prepare a research plan in the form of a thesis proposal.

Open to graduate students in other sciences with permission of the instructor.

Staff

Biophysics 217b.
Cell Motility See Biochemistry 217b.
Ms. Lowey

Biophysics 220a.
**Transmission and
Neuronal
Modulation** See Biochemistry 220a.
Mr. Levitan

Biophysics 229b.
**Special topics in
Inorganic
Chemistry:
Introduction to
X-ray Structure
Determination** Mr. Caspar

Biophysics 231a.
Immunology See Biochemistry 231a.
Messrs. Murakami and Levine

Chemistry

Objectives

The graduate program in chemistry, comprising course work, seminar participation, and research, is designed to lead to a broad understanding of the subject. The graduate program leads to the M.A. and Ph.D. degrees in chemistry. The Ph.D. is offered with specializations in inorganic, organic, physical and physical-organic chemistry and in chemical-physics. (Detailed information on the interdisciplinary specialization in chemical physics is found on page 37). All students will be required to demonstrate knowledge in advanced areas of inorganic, organic and physical chemistry. The doctoral program is designed to be flexible so that individual programs of study may be devised to satisfy the particular interests and needs of each student. In each case this program will be decided by joint consultation between the student and the Departmental Committee of Graduate Studies and the thesis supervisor, when selected. The doctoral program will normally include a basic set of courses in the student's own area of interest, to be supplemented by advanced courses in chemistry and, where appropriate, in biochemistry, biology, mathematics and physics.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. In addition, the undergraduate curriculum of applicants should include courses in physics and mathematics (differential and integral calculus), and courses in general and inorganic, analytical, organic and physical chemistry.

Admission to advanced courses will be based upon results of a qualifying examination in each of these areas of chemistry, which will be taken upon entrance. These examinations will determine if the student shall be required to make up deficiencies in preparation. The results of the qualifying examinations will be considered in the assignment of awards for the subsequent years of graduate study and in determining a student's eligibility to continue in a degree program.

Faculty

Professor **Irving R. Epstein:** Chair. Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics.

University Professor **Saul G. Cohen:** Chemistry of free radicals; organic photochemistry; specificity and mechanism of reactions of enzymes.

Professor **Ernest Grunwald:** Infrared laser chemistry; molecular absorption from IR laser sources; molecular electronic spectra and conformational studies at high temperatures; solvation in polar liquid solutions; molecular structure of ion pairs.

Professor **James C. Hendrickson:** Synthesis of natural products; computerization of synthesis design and development of new synthetic reactions.

Professor **Peter C. Jordan:** Statistical mechanics of cooperative phenomena and of membrane transport; electrostatic modeling of ion pores.

Professor **Kenneth Kustin:** Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; membrane transport; fast reactions; oscillating reactions.

Professor **Henry Linschitz:** Reactions of excited molecules; electron-transfer processes; photo-ionization in solution; metal complexes; physical mechanisms of photo-biological processes.

Professor **Myron Rosenblum:** Chemistry of organometallic complexes of the transition elements; new methods in organic synthesis employing organometallic complexes.

Professor **Colin Steel:** Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions; photophysics and photochemistry of infrared laser-induced reactions

Professor **Robert Stevenson:** Isolation and structure of natural products; compounds of medicinal interest (steroids, terpenoids, lignans, heterocycles).

Professor **Thomas R. Tuttle, Jr.:** Chemistry of liquid solutions; the composition and structures of species in metal solutions in polar solvents; application of spectroscopy, e.g., magnetic resonance, optical and spectropolarimetry to elucidation of the composition and structure of solutions; theory of chemical species in solution.

Associate Professor **Iu-Yan Chan:** Optically detected magnetic resonance; time resolved magnetic resonance; laser spectroscopy.

Associate Professor **Bruce M. Foxman:** X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions.

Associate Professor **Michael J. Heuchman:** The chemistry of ions in the gas phase; the effect of solvation on reactivity and mechanism.

Associate Professor **Philip M. Keehn:** Synthetic methods, organic synthesis of strained rings and theoretically interesting molecules; applications of nmr spectroscopy to organic systems; photooxidation; pure and applied laser chemistry of organic systems.

Associate Professor **Barry B. Snider:** Synthetic methods; mechanism of synthetically important reactions; total synthesis of natural products.

Assistant Professor **Alan M. Stolzenberg:** Bioinorganic chemistry; synthesis, structure, and reactivity of inorganic and organometallic complexes; homogeneous catalysis; electrochemistry and electron transfer.

Assistant Professor **Louis S. Stuhl:** Organometallic synthesis, catalysis and mechanism; novel ligands and oxidation states in organometallic complexes, and applications to organic synthesis.

Degree Requirements

	Detailed information on the interdisciplinary specialization in chemical physics is found on page 37) Entering students may be admitted to either the master's or the doctoral program. All candidates for advanced degrees are required to meet the following requirements:		students entering with previous graduate experience, a maximum of five courses may be transferred for credit. It is expected that doctoral students will choose a research adviser during the first year, normally in the second semester.
Qualifying Examination.	These examinations are set twice a year, in September and January, and are based on the undergraduate chemistry curriculum. Students are required to take and are expected to pass qualifying examinations in organic, inorganic-analytical and physical chemistry during their first year.	Admission to Candidacy.	A student is recommended for admission to candidacy for the doctoral degree upon certification by his or her thesis adviser and the Graduate Studies Committee that the student has satisfied the qualifying and language examination requirements and has made satisfactory progress in the program of study, research and the final Ph.D. examinations.
Language Requirements.	Each student is obliged to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.	Final Examinations.	The graduate student must demonstrate proficiency by taking final examinations in his or her major field: organic, physical-organic, physical, or inorganic chemistry. In the organic chemistry program, a cumulative examination procedure is used. Each year, six one-hour examinations (on unannounced topics), and one three-hour examination (on an announced reading) are given. The final examination requirement is satisfied by the student having passed a) one three-hour examination and six one-hour examinations, or b) two three-hour examinations and three one-hour examinations. In physical-organic chemistry, final examinations are administered twice a year and are based on assigned readings. Students must pass three of these examinations and must maintain satisfactory progress toward this end. In physical chemistry and inorganic chemistry, generally during the third semester of graduate work, the student is assigned a set of propositions. In physical chemistry the set consists of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two. In inorganic chemistry the student is assigned two propositions; he or she takes a written examination on one proposition, and is assigned two propositions; he or she takes a written examination on one proposition, and is examined orally on his or her proposed research project and the remaining proposition.
Seminar.	Each student in residence is required to attend and participate in the seminar in his or her chosen area of concentration throughout the period of graduate study.		
Teaching.	It is expected that all graduate students will do some undergraduate teaching during the course of their studies.		
Placement and Evaluation of Progress.	Recommendations with respect to the first-year course of study will be based on the performance on the initial qualifying examinations. Admission to the graduate degree programs will be based on the student's record in course work during the first year and the performance on the qualifying examinations.		

Master of Arts

Program of Study.	Each candidate is required to complete successfully one year of study at the graduate level in chemistry, or, with prior permission of the Departmental Graduate Studies Committee, in related fields. The program will include laboratory work and, normally, six semester courses at the graduate level. The detailed program of study will be one jointly arrived at by the candidate and the Graduate Studies Committee to reflect the candidate's area of interest as well as perspective of other areas.		
Residence Requirement.	The minimum residence requirement for the M.A. degree is one year.	Residence Requirements.	The minimum residence requirement for the Ph.D. degree is two years.
		Dissertation and Defense.	A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

Doctor of Philosophy

Program of Study.	A balanced program of study will be prepared by the students and the Departmental Graduate Studies Committee. In general, students will be required to take a minimum of seven graduate level courses, of which two must lie outside the student's field of research. If a student fails to pass a qualifying examination after two attempts, a graduate course has to be taken in that area of chemistry before the end of the second year. For this purpose a list of appropriate courses is available upon request. For
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Courses of Instruction

Chemistry 113b. □ Not offered 1983-1984.

Advanced Laboratory Techniques: Modern Organic Methods

Chemistry 121a. **Inorganic Chemistry I, Lectures** Introduction to the electronic and molecular structures and kinetics and reaction mechanisms of transition-metal complexes. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry. Three lecture hours a week.

Mr. Stolzenberg

Chemistry 129b. □ Not offered 1983-1984.

Inorganic Chemistry Laboratory

Chemistry 130a. □ Not offered 1983-1984.

Advanced Organic Chemistry: Structure

Chemistry 131a. □ Not offered 1983-1984.

Advanced Organic Chemistry: Topics in Structure and Reactivity

Chemistry 132b. **Advanced Organic Chemistry: Spectroscopy** Application of physical and spectroscopic methods to the elucidation of structure and stereochemistry of organic compounds. Prerequisite: Satisfactory grade in Chemistry 130a or permission of instructor.

Mr. Keehn

Chemistry 133a. **Advanced Organic Chemistry: Mechanisms** Kinetics, stereochemistry and mechanisms of selected organic reactions. Prerequisites: Satisfactory grade in undergraduate courses in organic and physical chemistry.

Mr. Stuhl

Chemistry 134bR. **Advanced Organic Chemistry: Synthesis** Systematic design of organic syntheses, including a survey of reaction for construction and functionalization of organic molecules and criteria for their use in synthesis design. Selected total syntheses from the literature will be examined.

Mr. Snider

Chemistry 141a. **Advanced Physical Chemistry I** Thermodynamics and statistical thermodynamics. Properties of real systems: gases phase stability, chemical equilibrium, and solution. Statistical equilibrium, ensembles, and fluctuations. Prerequisite: Satisfactory grade in an undergraduate courses in physical chemistry.

Mr. Steel

Chemistry 141b. **Advanced Physical Chemistry I**

Irreversible thermodynamics and chemical kinetics. Entropy production, reciprocal relations, microscopic reversibility and regression of fluctuations. Active transport, relaxation kinetics and oscillating reactions. Solution kinetics including enzyme reactions. Gas kinetics and theories of elementary processes. Microscopic kinetics: energy transfer and collision dynamics. Prerequisite: Satisfactory grade in Chemistry 141a or permission of instructor.

Mr. Kustin

Chemistry 142bR. **Advanced Physical Chemistry II**

Quantum mechanics: waves and wave packets, operator methods, Schrodinger's equation, simple model systems, angular momenta, perturbation theory and variational principle. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry.

Mr. Epstein

Chemistry 143aR. **Advanced Physical Chemistry II**

A continuation of Chemistry 142b. Quantum chemistry: spin, atomic and molecular structure, spectroscopy, chemical binding, advanced topics. Prerequisites: Satisfactory grade in an undergraduate course in physical chemistry.

Mr. Chan

Chemistry 144aR. **Structure and Spectroscopy**

□ Not offered 1983-1984.

Chemistry 145b. □ Not offered 1983-1984.

Special Topics

Chemistry 150c. □ Not offered 1983-1984.

Special Topics in Chemistry

Biochemistry 100a.

Introductory Biochemistry

Section 1: Mr. Hollocher
Section 2: Mr. Lowenstein

Biochemistry 100aR.

Introductory Biochemistry

See Biochemistry 100a.
Mr. Murakami and Ms. Lowey

Chemistry 200. **Advanced Chemistry Laboratory**

Staff

Chemistry 220c. **Inorganic Chemistry Seminar**

Required of graduate students in inorganic chemistry, who must audit this course each year.

Staff

Chemistry 221b. Advanced Inorganic Chemistry I	□ Not offered 1983-1984.	Chemistry 241c. Physical Chemistry Seminar	Required of graduate students in physical chemistry, who must audit this course each year. Staff
Chemistry 222b. Advanced Inorganic Chemistry II	□ Not offered 1983-1984.	Chemistry 243a. Statistical Thermodynamics	Elementary statistical mechanics of systems in equilibrium; Boltzmann, Fermi-Dirac and Bose-Einstein statistics; microcanonical, canonical and grand canonical ensembles; applications to thermodynamic systems. Mr. Jordan
Chemistry 229b. Special Topics in Inorganic Chemistry	X-ray diffraction, space groups and unit cells; techniques of data collection and structure solution with examples; application of principles of structural chemistry to problems in reactivity, organic solid phase synthesis, and conducting solids. Mr. Foxman	Chemistry 244a. Special Topics in Physical Chemistry	□ Not offered 1983-1984.
Chemistry 231c. Organic Chemistry Seminar	Required of graduate students in organic chemistry, who must audit this course each year. Staff	Chemistry 245a. Physical Organic Chemistry	□ Not offered 1983-1984.
Chemistry 232b. Chemistry of Heterocyclic Compounds	□ Not offered 1983-1984.	Chemistry 250c. Chemical Physics Seminar	Required of graduate students in chemical physics, who must audit this course each year. Staff
Chemistry 233b. The Biosynthesis of Natural Products	□ Not offered 1983-1984.	The following courses are given every three to five years or when there is sufficient student interest:	
Chemistry 234b. Chemistry of Organometallic Compounds	The chemistry of organo-transition metal complexes, including their behavior and the fundamental principles governing their chemical reactions. Mr. Rosenblum	Chemistry 122b. Inorganic Chemistry II, Lectures	□ Not offered 1983-1984.
Chemistry 235a. Special Topics in Organic Chemistry: Synthetic Organic Chemistry	□ Not offered 1983-1984.	Chemistry 123b. Nuclear Chemistry	□ Not offered 1983-1984.
Chemistry 235b. Special Topics in Organic Chemistry	□ Not offered 1983-1984.	Chemistry 248a. Advanced Quantum Chemistry	□ Not offered 1983-1984.
Chemistry 237bR. The Chemistry of Organic Natural Products	The chemistry of one or two specific groups of natural products with reference to occurrence, isolation, structure elucidation, group inter-conversion, synthesis and biogenesis. Mr. Stevenson	Chemistry Colloquium Lectures by faculty and invited speakers. Required of all graduate students. Non-credit.	
Chemistry 240c. Physical-Organic Chemistry Seminar	Required of graduate students in physical-organic chemistry, who must audit this course each year. Staff	Courses in Research	
		Chemistry 400. Organic Chemistry and Physical Organic Chemistry	Reaction mechanisms; photochemistry; enzyme reactions; free radicals. Mr. Cohen
		Chemistry 401. Organic Chemistry	Chemistry of natural products; steroids, triterpenoids, bisarylpropanoids, benzofurans. Mr. Stevenson

Chemistry 403. Organic Chemistry	Chemistry of organometallic complexes of the transition elements. New methods in organic synthesis employing organometallic complexes. Mr. Rosenblum	Chemistry 416. Physical Chemistry	Optically detected ENDOR investigation of organic triplet state molecules. Interaction between an electronically excited molecule and lattice phonon. Supersonic jet spectroscopy on large molecules. Mr. Chan
Chemistry 404. Organic Chemistry	Synthesis of natural products; development of new synthetic reactions; computerization of synthesis design systematics. Mr. Hendrickson	Chemistry 417. Organic Chemistry	Organic synthesis of strained ring and theoretically interesting molecules; synthetic methods; application of nuclear magnetic resonance spectroscopy to organic systems; photooxidation; thermal chemistry; pure and applied laser chemistry of organic systems. Mr. Keehn
Chemistry 406. Physical Chemistry	Reactions of excited molecules; luminescence; electron-transfer processes; metal complexes; physical mechanisms of photobiological processes. Mr. Linschitz	Chemistry 419. Inorganic Chemistry	X-ray structure determination; reactions in crystals; coordination polymers; kinetics, mechanisms, and crystallography of rearrangement, polymerization, and decomposition reactions in the solid-state. Mr. Foxman
Chemistry 408. Physical Chemistry	Experimental and theoretical study of chemical species in solution. Spectroscopic investigations of metal solutions in polar solvents. Mr. Tuttle	Chemistry 420. Organometallic Chemistry	Organometallic synthesis and reactivity; chemistry of transition metal cyano complexes; organometallic complexes in unusual oxidation states; catalysis of carbon-carbon bond formation and cleavage. Chemistry of phosphorin and its metal complexes. Mr. Stuhl
Chemistry 409. Inorganic Chemistry	Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; membrane transport; fast reactions; oscillating reactions. Mr. Kustin	Chemistry 421. Organic Chemistry	Synthetic methodology and natural product synthesis: Lewis acid induced carbon-carbon bond forming reactions of alkenes and their application to natural product synthesis; intramolecular reactions; ene and Prins reactions; synthesis of biologically active natural products. Mr. Snider
Chemistry 411. Physical Chemistry	Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions. Photophysics and photochemistry of infrared laser-induced reactions. Mr. Steel	Chemistry 422. Inorganic Chemistry	Synthesis, structure and reactivity of inorganic and organometallic complexes. Bioinorganic chemistry. Mr. Stolzenberg
Chemistry 412. Physical and Physical Organic Chemistry	Infrared laser chemistry; molecular absorption from IR laser sources; molecular electronic spectra and conformational studies at high temperatures; solvation in polar liquid solutions; molecular structure of ion pairs. Mr. Grunwald	Ph.D. in Chemistry with Specialization in Chemical Physics	The graduate program in chemical physics is an interdisciplinary specialization designed to meet the needs of students who wish to prepare themselves for the study of scientific problems using the methods and theories of modern physics and physical chemistry. This objective is attained by (1) formal course work in chemistry, physics, and, possibly, mathematics; (2) participation in relevant graduate seminars; (3) a program of supervised research involving chemical physics; (4) independent study. The program is designed to be flexible in providing individual programs of study to satisfy the particular interests and needs of each student. Final programs of study and research will be jointly arrived at by the student, his or her research supervisor and the Chemical Physics Committee. Only candidates for the Ph.D. will be accepted.
Chemistry 413. Physical Chemistry	Membrane transport; electrostatic modeling of ion pores, properties of ferrofluids Mr. Jordan		
Chemistry 414. Physical Chemistry	Kinetic studies of the reactions and properties of ions and solvated ions in the gas phase. Mr. Henchman		
Chemistry 415. Physical Chemistry	Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics. Mr. Epstein		

Admission

The general requirements for admission to the Graduate School apply to candidates for admission to the graduate program in chemical physics. Applicants should have a strong undergraduate background in chemistry, physics and mathematics.

Degree Requirements

No master's degree is offered with specialization in chemical physics, but students who satisfy the appropriate requirements will be eligible for the M.A. degree in chemistry.

All candidates for the Ph.D. degree in Chemistry with specialization in chemical physics must meet the following requirements:

Qualifying Examinations.

Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry, physics and mathematics by the performance in three qualifying examinations: one each in physical chemistry, organic or inorganic/analytical chemistry and physics/-mathematics. These examinations are set twice a year, in September and January. Results of these examinations will be used as an aid in constructing the student's initial program of course work and will be considered by the Chemical Physics Committee in evaluating the student's progress.

Language Requirements.

Each student is required to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.

Seminar.

Each student in residence is required to attend and to participate in the Chemical Physics Seminar. Participation in other seminars in physics and chemistry is also recommended.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Doctor of Philosophy

Program of Study.

It is expected that some candidates for the Ph.D. degree in chemistry with specialization in chemical physics may require a longer period of time in course work than will students in either of the fields of physics or chemistry. In general, the program for the Ph.D. in chemistry with specialization in chemical physics will include eight semester graduate courses: four in physical chemistry, one in either organic or inorganic chemistry and three in physics. No specific course work in mathematics is required, but students are expected to be familiar with the techniques necessary for the proper pursuit of their research. In addition, each student is expected to demonstrate a knowledge of elementary computer programming.

Students may satisfy their program's course requirements in part or in entirety by passing (or giving evidence of ability to pass) the final examination in the appropriate number of such courses. Courses in areas related to chemistry and physics may also be considered by the Chemical Physics Committee in partial fulfillment of the requirements.

Admission to Candidacy.

Students are recommended for admission to candidacy for the doctoral degree upon certification by their thesis adviser and the Chemical Physics Committee that they have satisfied the qualifying and language examination requirements and have made satisfactory progress in the program of study, research and the final Ph.D. examination.

Final Examinations.

Final examinations in chemical physics are generally taken during the third semester of graduate work. The student is assigned a set of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two.

Residence Requirements.

The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense.

A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

Classical and Oriental Studies

Oriental Studies Program

Objectives

The program of studies aims at preparing the student for teaching and research in the history, languages and archaeology of the ancient civilizations of the Nile valley, western Asia and the Aegean.

The program has a twofold purpose: first, to train students who wish to specialize in these areas of study; second, to offer an opportunity to students in other fields to integrate with their own studies the courses given in the Department.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program.

Students planning to enter this Department should take as much Hebrew, Greek and Latin as possible during their undergraduate study. They should also make every effort to achieve a sight reading knowledge of French and German before embarking on graduate study.

Faculty

Associate Professor
Ian A. Todd,
Chair:
Aegean and Near
Eastern archaeology.

Professor
Douglas J. Stewart:
Greek language and
philosophy.

Professor
Louis V. Zabkar,
Director of Graduate
Studies:
Egyptian language,
history and
archaeology.

Associate Professor
Patricia A. Johnston:
Latin language and
literature.

Associate Professor
**Leonard C.
Muellner:**
Greek language and
literature.

Assistant Professor
Martha A. Morrison:
Cuneiform studies.
Mesopotamian his-
tory, language.

Assistant Professor
Susan Scheinberg:
Greek and Latin lan-
guage and literature.

Assistant Professor
Cheryl L. Walker:
Classical history.

Adjunct Assistant
Professor
Jean D'Amato:
Latin Language and
Literature

Degree Requirements

Master of Arts

Program of Study.

Each candidate for the master's degree is required to complete satisfactorily not less than eight semester-courses in the department, plus any additional course work that the major professor may prescribe. While an exceptionally well-prepared student may fulfill the requirements for the degree in one year, two years of study will normally be required. Master's examinations will not be administered before the end of the second year of residence except by special permission of the department. All students, whatever their principal area of specialization, will be required to study in all three major areas covered by the department, namely, language, history, and archaeology.

Language Requirement.

The candidate must demonstrate a reading proficiency in French or German, and competence in at least one ancient language. Certain areas of specialization will require the knowledge of additional languages.

Qualifying Examinations.

The student must demonstrate, in written and oral examinations, proficiency in two major areas of the program.

Doctor of Philosophy

Program of Study.

The requirements are the same as for the Master of Arts degree, plus eight additional semester-courses in the department.

Language Requirement.

The candidate must demonstrate a reading knowledge of two modern foreign languages, ordinarily French and German, and competence in at least one ancient language. Certain areas of specialization will require the knowledge of additional languages.

Qualifying Examinations.

The student must demonstrate, in written and oral examinations, proficiency in two major areas of the program. A thorough competence must be demonstrated in the field of concentration as well as proficiency in another area of the program elected by the student.

Admission to Candidacy.

A student shall be eligible for admission to candidacy upon completing the language requirements and satisfactorily passing the written and oral qualifying examinations.

Dissertation and Defense.

The dissertation must be a significant and original contribution to scholarship demonstrating a capacity for independent research based on primary sources. The completed dissertation shall be read and found acceptable by its director and two other readers, one of whom must be a member of another department or from another academic institution. The candidate must defend the dissertation successfully in a Final Oral Examination.

Courses of Instruction

Classics

Greek 116a.
Aristophanes

Reading and discussion of Aristophanes' **Lysistrata**.

Mr. Steward

Clors 107b.
Temple, Myth and Ritual in Ancient Mesopotamia

□ Not offered 1983-1984.

Greek 116b.
Pindar

□ Not offered 1983-1984.

Clors 111.
The Archaeology of Syria-Palestine

□ Not offered 1983-1984.

Greek 118a.
Euripides

□ Not offered 1983-1984.

Clors 117.
The Archaeology of Mesopotamia and Iran

A survey of the material culture of the civilizations of Mesopotamia and Iran, from the Neolithic period through the Kassite period. The course includes an introduction to the environment, the first village settlements and the development of cities in this region of the Near East.

Greek 118b.
Sophocles

Reading and discussion of **Oedipus at Colonus**.

Mr. Muellner

Mr. Todd.

Greek 120aR.
Plato: A Literary Study

□ Not offered 1983-1984.

Clors 119.
The Archaeology of the Aegean

□ Not offered 1983-1984.

Greek 120b.
The Histories of Herodotus

□ Not offered 1983-1984.

Clors 120b.
Archaeological Methods

See Anthropology 109b.

Latin 116a.
Latin Prose Authors

Staff

Mr. Zeitlin

Latin 116b.
Satura

□ Not offered 1983-1984.

Clors 121aR.
Directions and Issues in Archaeology

□ Not offered 1983-1984.

Latin 118aR.
Latin Lyric and Elegiac Poetry

Reading and discussion of selections from Catullus, Horace, Propertius and Tibullus.

Ms. Steinberg

Clors 122.
The Archaeology of Anatolia

An introduction to the archaeology of Turkey from the Neolithic period through the Iron Age. Interconnections between the cultural traditions of Anatolia, Mesopotamia and the Aegean will be considered. Emphasis will be placed on the instructor's own field work in Neolithic and Bronze Age Anatolia.

Latin 118b.
Roman Historians

□ Not offered 1983-1984.

Mr. Todd

Latin 120aR.
Roman Epic Poets; Ovid's *Metamorphoses*

□ Not offered 1983-1984.

Clors 131.
Mathematics and Computers in Archaeological Data Analysis

See Anthropology 186.

Mr. Cowgill

Archaeology

Clors 100a and b.
The Archaeology of the Aegean and the Near East

□ Not offered 1983-1984.

Clors 146a.
Environment and Archaeology

See Anthropology 146a.

Ms. Zeitlin

Clors 188a.
Materials in Ancient Societies: Metals

See Anthropology 188a.

Mr. Cowgill

Clors 107a.
Temple, Myth and Ritual in Ancient Egypt

□ Not offered 1983-1984.

History		Clors 125b. Women in Classical Antiquity	□ Not offered 1983-1984.
Clors 101a. Survey of Greek History from the Bronze Age to 404 B.C.	The political and social development of the Greek city-states from the Bronze Age origins to the collapse of Athens at the end of the Peloponnesian War. Primary readings (in English) will be from the Iliad, Hesiod, the Poets and playwrights, Herodotus, Thucydides and Aristotle; a secondary text will provide supplemental analysis.	Clors 129a. Philo Judeaus of Alexandria	□ Not offered 1983-1984.
	Ms. Walker	Clors 129b. Alexandria: The City and the Idea	□ Not offered 1983-1984.
Clors 101b. Survey of Greek History from 404 B.C. to 146 B.C.	The political and social decline of the Greek city-state and its replacement by the Hellenistic monarchies until the Roman conquest. Primary readings (in English) will include Xenophon, Demosthenes, Arrian, Polybius, Plutarch, Josephus and Aristotle; a secondary text will also be used.	Clors 145bR. From Alexander the Great to Cleopatra VII: Egypt under the Ptolemies	□ Not offered 1983-1984.
	Ms. Walker		
Clors 102a. Roman History to 27 B.C.: A Survey	□ Not offered 1983-1984.	Clors 148aR. Rise, Function and Fall of Early Civilization: Concepts and Explanations	□ Not offered 1983-1984.
Clors 102b. Topics in Roman History: From Republic to Empire	□ Not offered 1983-1984.	Clors 149a. The World Before Civilization	□ Not offered 1983-1984.
Clors 103a. Islam: Civilization and Institutions	See NEJS 104a. Messrs. Krek and Levy	Clors 150b. History of Egyptian Civilization	□ Not offered 1983-1984.
Clors 104a. Hesiod: <i>Works and Days</i>	□ Not offered 1983-1984.	Clors 160a. Ancient Egyptian Religion	A survey of religious beliefs and practices from Early Dynastic times to the end of the period of the great temples. Discussions will be illustrated by temple reliefs, tomb paintings, papyrus vignettes, etc., and will be accompanied by the reading of religious texts in English translation.
Clors 105b. Golden Age of Greece	□ Not offered 1983-1984.		Mr. Zabkar
Clors 106b. Greek Mythology	□ Not offered 1983-1984.	Clors 165a. Introduction to the History and Civilization of the Near East in the Pre-Islamic Period	□ Not offered 1983-1984.
Clors 109b. Imperial Roman History: A Survey	□ Not offered 1983-1984.	Clors 165b. History of Mesopotamia in the 2nd and 1st Millennia B.C.	□ Not offered 1983-1984.
Clors 110b. The World Through Greek Eyes	Will study Greek attitudes toward and perceptions of their feelings fellow Greeks and their neighbors in the Mediterranean world, including Jews, Persians, Egyptians, Celts, Germans and Romans; primary readings (in English) from Herodotus, Thucydides, Xenophon, Aeschylus, Euripides, Aristophanes, Demosthenes, Aristotle, Polybius and others.	Clors 166a. Topics in Mesopotamian History: Second Millennium B.C.	Topics concerning social and economic problems and issues in the 2nd millennium B.C. will be discussed and analyzed. Among the major areas of concern will be the Old Assyrian merchant colonies, the social and economic structure of Nuzi and the palace of Syria.
	Ms. Walker		Ms. Morrison

+1	Classical and Oriental Studies		
Clors 167b. Topics in Mesopotamian History: First Millennium B.C.	□ Not offered 1983-1984.	Egyptian 101. Elementary Egyptian	A study of Middle Egyptian based on Gardiner's <i>grammar</i> . The principal texts to be read are those included in Blackman's <i>Middle Egyptian Stories</i> and de Buck's <i>Readingbook</i> . In the second term some Middle Egyptian hieratic is read.
Clors 168a. The Hellenistic Period in Mesopotamia	□ Not offered 1983-1984.		Mr. Zabkar
Clors 170a. Historiography in the Ancient World	□ Not offered 1983-1984.	Egyptian 102. Advanced Egyptian I: Selected Texts of the Ptolemaic Period	□ Not offered 1983-1984.
Languages		Egyptian 103a. Advanced Egyptian: Theban Inscriptions of the XVIIIth Dynasty	□ Not offered 1983-1984.
Clors 108b. Comparative Grammar of Semitic Languages	□ Not offered 1983-1984.		
Akkadian 101a. Elementary Akkadian I	Intensive study of Akkadian grammar. Readings in the Code of Hammurabi and other Old Babylonian materials. Ms. Morrison	Egyptian 104a. Advanced Egyptian: Texts of the Rameside Period	□ Not offered 1983-1984.
Akkadian 101b. Elementary Akkadian II	A continuation of Akkadian 101a. Ms. Morrison	Egyptian 104b. Advanced Egyptian: Texts of the Rameside Period	Mr. Zabkar
Akkadian 102. Advanced Akkadian I	□ Not offered 1983-1984.	Egyptian 105a. Advanced Egyptian: Songs, Hymns and Prayers	□ Not offered 1983-1984.
Akkadian 103a. Advanced Akkadian III: Second Millennium Texts	□ Not offered 1983-1984.	Egyptian 107a. Advanced Egyptian: Readings in Egyptian Texts II	
Arabic 101. Introductory Literary Arabic	See NEJS 101. To be announced	Hittite 101. Elementary Hittite	□ Not offered 1983-1984.
Arabic 102a. Intermediate Literary Arabic	See NEJS 102a. Mr. Levy	Sumerian 201b. Sumerian Historical Inscriptions	□ Not offered 1983-1984.
Arabic 102b. Intermediate Literary Arabic	See NEJS 102b. Mr. Krek	Ugaritic 101.	□ Not offered 1983-1984.
Arabic 103a. Advanced Literary Arabic	See NEJS 103a. Mr. Krek	Clors 301-309. Directed Readings	301. Mr. Zabkar 302. Mr. Todd 303. Ms. Morrison 304. Mr. Stewart 305. Mr. Muellner 306. Ms. Johnston 307. Ms. Walker 308. Ms. Scheinberg 309. Ms. D'Amato
Arabic 103b. Advanced Literary Arabic	See NEJS 103b. Mr. Levy	Clors 401-405. Dissertation Research	401. Mr. Zabkar 402. Mr. Todd 403. Ms. Morrison 404. Mr. Stewart 405. Mr. Muellner 406. Ms. Johnston 407. Ms. Walker 408. Ms. Scheinberg
Coptic 101. Coptic Language	□ Not offered 1983-1984.		

Cross-Registration at Boston College, Boston University and Tufts University

A full-time graduate student at Brandeis University may enroll in one graduate course at Boston College, Boston University or Tufts University. Brochures suggesting courses for cross-registration at each of the host institutions are available at the graduate school office of each institution.

A student who wishes to enroll in a course at one of these institutions should consult with the instructor in the particular course and should expect to satisfy the prerequisites and requirements normally required

for admission to the course, including adherence to the academic calendar of that course.

A student at Brandeis University who wishes to enroll in a graduate course at one of the host institutions should obtain a registration permit from the Graduate School Registrar and should present this permit to the Graduate School Registrar of the host institution.

Economics

Although the University does not offer graduate study in Economics, it does offer a significant group of upper-level courses which may be of interest to graduate students in other departments. These courses receive graduate credit on permission of the student's adviser.

Courses of Instruction

Economics 24a.
The Soviet Economy Mr. Berliner

Economics 27b.
The Economy of Japan This course examines Japan's economic history and growth. It investigates various issues in labor economics, industrial organization, inflation and dependence on trade.
Mr. Evans

Economics 32b.
Comparative Systems Analysis of structure and performance of alternative economic systems. Theoretical models to be discussed are capitalism and several varieties of socialism: utopian, market, and authoritarian. Among real world analogs, extensive attention will be given to the Soviet economy; others include the Yugoslavs, the Chinese and at least one West European "mixed" economy in which public ownership, private enterprise and some form of economic planning play substantial roles.
Mr. Berliner

Economics 37aR.
The Political Economy of Cities This course will consist of a formal analysis of the structure of metropolitan areas and an exploration of the set of economic and social problems that have beset city life.
Mr. Ferguson

Economics 44bR.
Economics of the Arts The application of economic analysis to both the performing arts and the visual arts. We shall examine questions of productivity, public subsidy and the nature of demand. In addition, special topics such as industry structure, pricing policies, copyright, public television and labor unions will be covered.
Mr. Braunstein

Economics 60a.
International Economic Policy Introduction to international economic analysis through policy issues. Specific policy problems, such as the protectionist response triggered by the extraordinary growth of U.S. auto imports over the past fifteen years, provide a laboratory for examining and testing theories in two main branches in international economics: trade and protection, and finance and foreign exchange.
Mr. Coiner

Economics 74bR.
Law and Economics A study of economic foundations of American law in selected areas of interest. Topics will include: the role of property rights and liability rules in the control of externalities; controlling the cost of accidents; the control of criminal behavior; product failure and damage; medical malpractice. The effects of judgments and status will be studied.
Prerequisite: ECON 2a.
Mr. Weckstein

Economics 75a.
The Economics of Underdeveloped Countries The economic circumstances of poor countries and their special problems: misfit technologies, income inequality, urban unemployment, and the terms of their participation in the World Economy. Their policy option and the roles for rich countries are studied.
Mr. Weckstein

Economics 76b.
Trade Unions, Collective Bargaining and Public Policy Study of institutional aspects of labor economics in the United States. Attention will be paid to the history and development of trade unions, the process of collective bargaining, the effect of unions on wages and other conditions of employment and legal environment governing labor relations. Public sector labor issues will also be discussed.
Mr. Filer

Economics 80a. Microeconomic Theory	Analysis of the behavior of economic units within a market economy. Emphasis upon individuals' decisions as demanders of goods and suppliers of resources and firms' decisions as suppliers of goods and demanders of resources under various market structures. Related topics such as welfare and market efficiency, market failure, and general equilibrium.	Economics 135a. Industrial Organization	Economic analysis of American industry in terms of market structure, conduct and performance. Topics included are business organization, concentration, barriers to entry, price and product policies, profits, efficiency and productiveness. <i>Prerequisite:</i> ECON 80a.
Mr. Braunstein		Mr. Such	
Economics 82b. Macroeconomic Theory	The meaning of the national income concepts; the factors determining the level of national income, employment and prices; the influence of fiscal and monetary policies; theory of economic growth. <i>Prerequisite:</i> ECON 8b.	Economics 136b. Managerial Economics	An application of the skills of the economists to problems of modern managers in business, the public sector and non-profit private institutions.
Mr. Dolbear		Mr. Braunstein	
Economics 83a. Statistics for Economic Analysis	A first course in statistical inference. Topics include descriptive statistics, probability, normal and binomial distributions, joint distributions, sampling distributions, point and interval estimation, properties of estimators, testing of hypotheses, simple and multiple regression, analysis of variance. <i>Prerequisite:</i> ECON 2a.	Economics 157a. The Economics of the Environment and of Natural Resources	This course will investigate the theoretical and policy problems posed by the use of both renewable and non-renewable resources. Theoretical topics include: the optimal pricing of resources. Theoretical topics include: the optimal pricing of resources, the optimal use of standards and taxes to correct pollution problems under uncertainty, the measurement of costs and benefits, and the effect of technological change on resource use. Throughout the course, emphasis will be placed on the application of theory in designing environmental and resource policy.
Mr. Petri		Mr. Lurie	
Economics 84b. Econometrics	An introduction to the construction and testing of econometric models. Both single and multiple equation models will be studied. <i>Prerequisite:</i> ECON 80a, 82b, 83a.	Economics 161a. Multinational Corporation	The economic theory of direct foreign investment is developed and applied in the analysis of the history of the multinational corporation. The problem raised by these compromises are examined and various solutions considered. The policies of both home countries and host countries are analyzed and evaluated.
Mr. Luckett		Mr. Kindleberger	
Economics 86h. Quantitative Economic Models	Study of various types of quantitative models in applied economic analysis and forecasting, including input-output, linear programming and macromodels.	Economics 162b. Financial History of Western Europe	The history of the development of money, banks, and other financial institutions of Western Europe from the industrial revolution to the present.
Mr. Petri		Mr. Kindleberger	
Economics 89a. Introduction to Mathematical Economics	This course will focus on the application of mathematical techniques and tools in economics. Our purpose will be to investigate a variety of economic analyses in which mathematical techniques prove useful. Topics include optimization, linear and non-linear programming, discounting, the mathematics of multiple regression, economic model solving and dynamic analysis.	Economics 16+aR. The Economics of the Non-profit Sector	In this course we will examine the non-profit sector. What is this increasingly important sector and what determines the choice of non-profit versus for-profit organizational form? Our investigation will include such issues as informational asymmetries, for-profit "efficiency" versus non-profit "X-efficiency," institutional "trust," public versus private goods, adverse selection and moral hazard, and the role of government. We will focus on a critical review of the literature with particular emphasis on developing an ability to question assumptions and methodologies.
Mr. Such		Mr. Pulley	
Economics 134b. Public Finance	The theory of government and collective activities; the effects of taxation on efficiency and equity; problems of cost and choice in government expenditures. Special attention to Reagan budget changes and the proposals to require a balanced budget.	Economics 171a. Financial Markets	The evaluation and selection of investment assets, portfolio composition, the operation of markets for financial assets and the role of specialized financial firms.
Mr. Williams		Mr. Williams	

**Economics 172b.
Money and Banking**

The theory and practice of financial intermediation, with special reference to the behavior of commercial banks and other financial institutions. Emphasis is on analysis of the general economic role of intermediaries and the effect of risk on their operations. The techniques these firms use to cope with risk, such as loan pooling and diversification, are studied in detail. The effects of recent changes in government regulation (i.e., relaxation of Regulation Q, creation of money market funds, etc.) upon bank behavior are studied.

Mr. Lurie

**Economics 176a.
Labor Market
Economics**

The application of economic theory to the labor market. Issues discussed will include worker's decisions regarding labor supply, firms' demands for labor, education and training, unemployment and discrimination in the labor market. Attention will be given to how the labor market decisions and experiences of various groups (such as women, minorities and youth) differ.

Mr. Filer

**Economics 179b.
Legal Regulation of
Economic Activity**

This course will examine the reasons for economic regulation in certain industries and the effects of regulation on efficiency, distribution of income, and innovation. Special emphasis will be placed on antitrust laws and public utility regulation. Other topics will include price discrimination, quality regulation, product safety, and environmental considerations.

Mr. Braunstein

**Economics 180aR.
Advanced Micro-
economic Theory**

Advanced topics of microeconomic analysis designed to extend, refine, apply and combine the analysis of ECON 80a and 83a. For example, the "certain" world of intermediate price theory is extended to a world where decisions are made under uncertainty — fusing decision analysis of 80a with the probabilistic methods of 83a.

Mr. Such

**Economics 182a.
Advanced
Macroeconomics**

This course extends the analysis of macroeconomic issues introduced in ECON 82b. Special topics include: inflation, unemployment, supply-side economics, expectations, growth, monetarism, deficit spending, long-run properties of short-run models, and the microeconomics of macro models.

Mr. Dolbear

Cognitive Science

See Psychology (page 94).

Comparative History

Objectives

The graduate program in comparative history, leading to the degree of Doctor of Philosophy in History, aims to train students in the comparative approach that comprises the best tradition in historical scholarship. Comparative history builds on the development of expertise in a specific field — in this program usually early modern European history — but it also involves the conceptualization and study of the past according to political, social, economic, cultural, intellectual and psychological categories that transcend parochial national or period divisions.

Through wide though carefully focused readings, students are encouraged to develop the ability to make cross-cultural comparisons across the five continents and the span of recorded time. Thus, for example, students of social mobility, institutional change, the class of ideologies, or the organization of the state will deepen their understanding of how different cultures approach, define and resolve the issues at hand. The formal program focuses above all on the comparative history of Western Europe, but students will find a structured opportunity to examine the patterns of American civilization as well, and to study for comparative purposes Russia and Eastern Europe, Latin America, Africa, and the Near and Far East.

The program is designed to help students to cope with the competitive academic environment of the next decade by training them rigorously in methods of historical research and writing, by equipping them to teach the whole range of European history from the Renaissance to the present, and by fostering the intellectual flexibility and interdisciplinary skills that command a premium outside the academic marketplace.

A small, select student body will work in close cooperation with the faculty. Most instruction will take place in seminars specifically designed for graduate students or in individual conferences with faculty advisers. From the beginning, the curriculum will help students prepare for their qualifying examinations and guide them toward eventual dissertation research. Upon entrance, students will declare an intention to take qualifying examinations focusing either in the early modern period (1450-1789) or the modern period (1715 to the present). Formal faculty offerings are greater in the modern period, but a full range of instruction is also available for early modern history.

During the first year, students must prepare a major research paper on a topic chosen in consultation with a principal adviser. The paper may be comparative in research (involving two or more symmetrical case studies), or it may focus upon a single case (with that research informed by a reading of secondary literature on similar cases). The paper constitutes the major intellectual enterprise of the first year, and students allot half their time to it in the

first semester. First-year students also enroll in two introductory graduate colloquia, one devoted to the early modern period. During both of their first two years of residence, students must also enroll in the comparative history seminar, which treats significant problems in comparative perspective and introduces students to the methods and issues in comparative history. Students must also enroll in the historiography colloquium (offered alternate years). Finally, before they may take the qualifying examination all students must complete a tutorial or other work focusing on a part of the world geographically or chronologically removed from their principal area of specialization with a view to gaining a comparative perspective on their major research interest.

The qualifying examination for the Ph.D. is normally taken at the end of the second year. Students may specialize either in the early modern period (1450-1789) or the modern period (1715 to the present). But they must demonstrate a general mastery of two subject fields in European history from the Renaissance to the present. Students in some cases may elect an examination on the medieval period in lieu of either the early modern or modern period. The student may petition, moreover, to substitute the medieval period for a portion of the early modern period. In addition, a student with program approval may substitute a methodological field, such as psychohistory, anthropological history or quantitative history, for half of one conventional historical area. The subject fields will normally be chosen from such categories as social, economic, intellectual, cultural, political and international history.

Students should normally plan to complete all work for the doctorate, including the dissertation, within four to five years after entering the program; prolongation of study past the sixth year is discouraged.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply to candidates for admission to this program. Students with a sound preparation in history and who have demonstrated unusual imagination and critical insight will receive special consideration. Undergraduate majors in the other social sciences or in allied fields such as comparative literature may, however, apply. Applicants should submit a sample of written work, preferably in European history. Only doctoral candidates will be accepted into the regular program. Unusually well-qualified students with distinguished records who wish to obtain a master's degree in modern history before going on to further training in such fields as law, business, diplomacy, social work, journalism or medicine, or who have already earned degrees in these fields, may also be admitted.

Faculty

Associate Professor
William E. Kapelle
Chair:
Medieval history.

University Professor
Frank E. Manuel:
Modern European
intellectual history.

Professor
Rudolph Binion:
Modern history. Cul-
ture and thought.
Psychohistory.

Professor
Eugene C. Black:
Modern history. Politi-
cal and social
institutions.

Professor
John P. Demos:
Early modern history.
Social institutions.

Professor
David H. Fischer:
Modern history. Social
institutions.

Associate Professor
Gregory Freeze:
Russia. Social history.

Professor
Morton Keller:
Legal and political
institutions.

Professor
Marvin Meyers:
Ideas and politics.

Professor
**Stephen A.
Schucker**:
Modern diplomatic,
economic, political
and business history.

Professor
Milton I. Vanger:
Modern Latin Ameri-
can history. Political
institutions.

Associate Professor
**Bernard
Wasserstein**:
Modern European,
Jewish and Near East-
ern history.

Assistant Professor
Samuel Cohn:
Renaissance and early
Modern modern
history.

Assistant Professor
Alice Kelikian:
Modern history. Social
institutional history.

Assistant Professor
Alexander Keyssar:
Labor and working-
class history.

Assistant Professor
Hillel J. Kieval:
Modern European,
social and institutional
Jewish history.

Assistant Professor
James Kloppenburg:
Intellectual and cultu-
ral history.

Assistant Professor
Robert Schneider:
Early modern history.

Degree Requirements

Master of Arts

An M.A. degree in History will be awarded to those students who have satisfactorily completed one year of residence at full time, fulfilled the language requirement and passed a special examination at the master's level. Students who have completed the Ph.D. qualifying examinations and the stated requirements for the master's degree automatically qualify for conferral of the master's degree.

Doctor of Philosophy

Program of Study.

During the first year in the program, students will complete a major research paper and a joint colloquium in modern European history and American civilization. Within the first two years, they must also take a proseminar in early modern Europe, a historiography course and two seminars in comparative history, besides fulfilling the geographical outside-field requirement.

At the beginning of the third year, students will make an oral presentation setting their proposed dissertation topic in comparative perspective; this is called the "category examination." The student will, when feasible, spend the third or fourth year in the program abroad pursuing research for the dissertation. Arrangements can be made for conferences with foreign scholars who can advise on the subject of research.

Language Requirement.

The use of foreign languages is an essential tool for the comparative historian. Each student will be expected to pass, upon admission, one language examination testing the ability to read historical prose with a dictionary. The second language examination must be passed before the student registers for the third semester. All students must show competence in either French or German; for the second language another major tongue relevant to the student's research interests may be substituted.

Qualifying Examination.

Normally the student will take the qualifying examination at the end of the second year of study. Any student who has failed to complete the qualifying examination by the sixth semester will be dropped from the program.

Admission to Candidacy.

A student may be admitted to candidacy for the Ph.D. degree when he or she has completed course and residence requirements, demonstrated proficiency in the required foreign languages, passed the qualifying examination and gained approval of his or her dissertation topic by the faculty of the program.

Dissertation and Defense.

The student will normally define a dissertation topic in the term preceding the qualifying examination but in no case later than the end of the fifth semester in the program. When the student's dissertation committee accepts the completed dissertation, the candidate must defend it at a final oral examination.

Courses of Instruction

Seminars

History 190aR.
Historiography A critical analysis of classical historiography.
Mr. Fischer

History 200a.
Colloquium in European Comparative History Since the 18th Century Comparative examination of major historical issues in Europe and the United States from the eighteenth through the twentieth centuries. *Required of first-year graduate students in the Comparative History and the History of American Civilization Programs.*

Mr. Schuker

Comparative History 201b.
Colloquium in American and European Comparative History An introduction to the major issues and methods in the social history of Europe and the United States during the early modern periods.
Mr. Schneider

Comparative History 202b.
Seminar in Comparative History: □ Not offered 1983-1984

Comparative History 203b.
Seminar in Comparative History: Death in History Introduction to the methods of Comparative History through a consideration of the history of death.
Mr. Cohn

Comparative History 301 — 319a and b.
Research Papers 301a and b. Mr. Binion
302a and b. Mr. Black
303a and b. Mr. Demos
304a and b. Mr. Fischer
305a and b. Mr. Freeze
306a and b. Mr. Keller
307a and b. Mr. Manuel
308a and b. Mr. Meyers
309a and b. Mr. Schrecker
310a and b. Mr. Schuker
312a and b. Mr. Wasserstein
313a and b. Mr. Cohn
314a and b. Mr. Kapelle
315a and b. Ms. Kelikian
316a and b. Mr. Keyssar
317a and b. Mr. Kieval
318a and b. Mr. Kloppenberg
319a and b. Mr. Schneider

Comparative History 321 — 339a and b.
Readings 321a and b. Mr. Binion
322a and b. Mr. Black
323a and b. Mr. Demos
324a and b. Mr. Fischer
325a and b. Mr. Freeze
326a and b. Mr. Keller
327a and b. Mr. Manuel
328a and b. Mr. Meyers
329a and b. Mr. Schrecker
330a and b. Mr. Schuker
332a and b. Mr. Wasserstein
333a and b. Mr. Cohn
334a and b. Mr. Kapelle
335a and b. Ms. Kelikian
336a and b. Mr. Keyssar
337a and b. Mr. Kieval
338a and b. Mr. Kloppenberg
339a and b. Mr. Schneider

Comparative History 401-419.
Dissertation Research +01. Mr. Binion
+02. Mr. Black
+03. Mr. Demos
+04. Mr. Fischer
+05. Mr. Freeze
+06. Mr. Keller
+07. Mr. Manuel
+08. Mr. Meyers
+09. Mr. Schrecker
+10. Mr. Schuker
+12. Mr. Wasserstein
+13. Mr. Cohn
+14. Mr. Kapelle
+15. Ms. Kelikian
+16. Mr. Keyssar
+17. Mr. Kieval
+18. Mr. Kloppenberg
+19. Mr. Schneider

Comparative History 500.
Registration in Time

In addition the following courses may be taken as equivalent to Comparative History seminars.

History 110a.
The Civilization of the Early Middle Ages Mr. Kapelle

History 110b. □ Not offered 1983-1984
The Civilization of the High and Late Middle Ages

History 112b.
The Crusades and the Expansion of Medieval Europe Mr. Kapelle

History 113a. □ Not offered 1983-1984
English Medieval History

History 115b. □ Not offered 1983-1984
Seminar on Medieval Russia

History 123a.
The Renaissance Mr. Cohn

History 123b. □ Not offered 1983-1984
The Reformation

History 124a.
Topics in English
Constitutional and
Legal History

□ Not offered 1983-1984

History 125a.
The General Crisis
of the 17th Century
in Europe

□ Not offered 1983-1984

History 126bR.
Tudor-Stuart
England

Mr. Schneider

History 127b.
L'Ancien Regime:
State and Society in
Pre-Revolutionary
France

□ Not offered 1983-1984

History 130a.
The French
Revolution

□ Not offered 1983-1984

History 131b.
Topics in Modern
Social History:
Industrialization and
Social Change in
Europe

□ Not offered 1983-1984

History 132a.
Modern European
Thought and Cul-
ture: Marlowe to
Mill

□ Not offered 1983-1984

History 132b.
European Thought
and Culture Since
Darwin

Mr. Binion

History 133a.
The Enlightenment

Mr. Manuel

History 133b.
Topics in 19th and
20th Century Intel-
lectual History

□ Not offered 1983-1984

History 134a.
19th Century
Europe: From Revo-
lution to National
Unification

Mr. Black

History 134b.
19th Century
Europe: Nationalism,
Imperialism, Social-
ism (1870-1914)

Mr. Black

History 135a.
The Jews of Central
and East-Central
Europe, 1740-1939

Mr. Kieval

History 136a.
The Rise of Modern
Germany,
1648-1848

□ Not offered 1983-1984

History 136b.
Germany,
1849-1949

□ Not offered 1983-1984

History 137a.
Evolution of Inter-
national System,
1815-1945

Mr. Schuker

History 138a.
Economy and
Society in Europe,
1750-1900

Ms. Kelikian

History 138B.
Economy and
Society in Europe,
1900 to the Present

□ Not offered 1983-1984

History 139b.
Fascism East and
West

Ms. Kelikian

History 141b.
Studies in British
History — 1830 to
the Present

Mr. Black

History 142bR.
Twentieth Century
Europe

Mr. Binion

History 146bR.
Topics in German
History: Hitler,
Germany and
Europe

Mr. Binion

History 147a.
Rise of Imperial
Russia

Ms. Herlihy

History 147b.
Russia Since 1861

Ms. Herlihy

History 180aR.
Modern China

Mr. Schreker

History 181bR.
Seminar on Chinese
Thought

□ Not offered 1983-1984

History 182b.
Modern Southeast
Asian History

□ Not offered 1983-1984

History 183bR.
**The Great Powers
of the Middle East**

Mr. Wasserstein

History 184a.
**Arabs and Jews in
Palestine, 1881-1948**

□ Not offered 1983-1984

History 186aR.
**The Second World
War**

Mr. Wasserstein

History 191a.
**History and
Psychology**

Mr. Demos

History 194b.
**Politics and Diplo-
macy in Europe,
1914-1945**

□ Not offered 1983-1984

Comparative Literature

See Joint Program of Literary Studies (page 59).

English and American Literature

Objective

The graduate program in English and American Literature is designed to offer training in the interpretation and evaluation of literary texts with some attention to related scholarly disciplines, particularly history and linguistics. It also offers candidates who have some ability in writing an opportunity to pursue this interest as a normal part of the graduate program.

Admission

Candidates for admission should have a bachelor's degree, preferably with a major in English and American literature, and a reading knowledge of French, Italian, German, Greek, or Latin. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Faculty

Associate Professor
Michael T. Gilmore,
Chair:
Puritanism. Literature
of the American Revo-
lution, American
renaissance.

Associate Professor
Alan Levitan,
Acting Chairman
(Fall Term):
Shakespeare, Music
and drama.

Professor
Eugene Goodheart:
Criticism, Modern
American Literature.

Professor
Allen Grossman:
Poetry and poetic
structures. Seven-
teenth century litera-
ture, Modern and con-
temporary literature.

Professor
Benjamin B. Hoover:
Eighteenth century
literature.

Professor
Robert O. Preyer:
Nineteenth century
literature, Social and
intellectual history.

Professor
John H. Smith:
Shakespeare, Renais-
sance drama, Neo-
Latin literature.

Professor
Peter Swiggart:
American literature,
Criticism theory.

Visiting Fannie Hurst
Professor
Frank Bidart:
Poetry.

Visiting Fannie Hurst
Professor
Frank Conroy:
Fiction.

Associate Professor
Philip Fisher:
Nineteenth century
literature, Critical
theory.

Associate Professor
Karen W. Klein:
Medieval literature,
Women's studies.

Associate Professor
Richard J. Onorato:
Romantic literature,
Modern literature.

Associate Professor
Susan Staves,
Director of Graduate
Studies:
Restoration and eight-
eenth century
literature.

Assistant Professor
John Burt:
American literature

Assistant Professor
Judith Ferster:
Medieval literature.

Assistant Professor
James B. Merod:
Twentieth century
poetry.

Assistant Professor
Daniel Schenker:
Nineteenth century
literature, Modern
literature.

Writer-in-Residence
Denise Levertov:
Poetry.

Writer-in-Residence
Geoffrey Wolff:
Fiction.

Visiting Lecturer with
rank of Assistant
Professor
Martha Strom:
Contemporary Ameri-
can Literature.

Degree Requirements

Following are the degree requirements for the Department of English and American Literature. Students should also consult the General Degree Requirements and Academic Regulations found in an earlier section of this catalog.

Master of Arts

Program of Study. Each student will take English 200a. In addition, a normal program will consist of five courses, at least three of which will be 200-level seminars. Students must also register for English 295b (Major Text Examination).

Residence Requirement. The minimum residence requirement is one year, though students with inadequate preparation may require more.

Language Requirements. A reading knowledge of a major foreign language (modern European, ancient Greek, Biblical Hebrew or Latin). The completion of the language requirements at another university does not exempt the student from the Brandeis requirement.

Qualifying Examination. An oral examination, by committees of faculty members, will be given at the beginning of the spring term on one of several major texts, the texts to be announced at the end of the fall term. This examination will test a student's ability to read and understand a major literary work or a group of short works by the same author. Admission to the Ph.D. program in addition to qualification for the M.A. degree will depend upon the results of this examination, in addition to course evaluation.

Doctor of Philosophy

Admission to the Ph.D. Program.

(1) Students who complete, with distinction, the M.A. requirements at Brandeis University are admitted to the Ph.D. program by the Department upon recommendation of the Committee on Graduate Studies.

(2) Students who enter with a master's degree or a full year of graduate work in English from another university are required to fulfill the qualifying examination requirement described above under the Master of Arts Program. Provided this requirement is fulfilled, such students may, at the Department's discretion, be admitted to the Ph.D. program after successful completion of a semester at Brandeis and upon recommendation by the Committee on Graduate Studies. At the time of admission up to a year's residence and course credit for work completed elsewhere may be granted.

Program of Study. Second year students continue to take courses, usually two a semester. Students have an obligation to review their preparation in the field with their advisers and to ensure that they are acquiring both a comprehensive knowledge of the various historical periods and genres of English and American literature and a more profound knowledge of the particular period or field they propose to offer as a specialty. With the exception of English 200, no specific courses are required of all Brandeis Ph.D. candidates; each student's program will be designed in the light of the strengths and weaknesses of his or her previous preparation and in accord with his or her own interests.

Dissertation Field Examination.

A student who comes to Brandeis with a B.A. is required to take 12 courses for the Ph.D.; a student who comes with an M.A. is normally required to take 8 courses at Brandeis.

Residence Requirement.

The minimum residence requirement is one year beyond the master's degree or two years beyond the bachelor's.

Other Requirements

Language Requirement. In addition to the language requirement that has been met for admission to the Ph.D. program, the student must (1) demonstrate a reading knowledge of a second major foreign language; or (2) demonstrate an advanced competence in the first foreign language and a knowledge of its literature; or (3) take a graduate course, ordinarily a seminar, in a field closely related to research on the dissertation. Approval of the graduate committee must be sought before such a course is taken; the students must demonstrate the relevance of the proposed course to the dissertation.

Training in Teaching. Provided openings exist, students in their second and third year in the program can be expected to be awarded at least one teaching assistantship each year, provided their academic work is of high calibre.

Admission to Candidacy.

A student will be recommended by the Department for admission to candidacy for the Ph.D. degree after completing with distinction the program of study and satisfying all departmental requirements prior to the writing and defense of a dissertation. A student admitted to candidacy must have submitted a formal dissertation proposal, subject to approval by the student's dissertation director and by an additional member of the departmental faculty.

Dissertation and Defense.

Each student will submit a dissertation in a form approved by his or her dissertation director and by a committee appointed by the Director of Graduate Studies. The student will defend the dissertation at a final oral examination. The dissertation may be a monograph, a series of closely related essays, a bibliographical project or a textual project.

History and Structure of English

The Department also offers an alternative program in the history and structure of the English language, with specialization in Old, Middle, or Early Modern English. For details, address the chairman of the Department.

Courses of Instruction

English 120b. ☐ Not offered 1983-1984
The Tradition of the Short Poem in English

English 121a. ☐ Not offered 1983-1984
Exemplary Ancient Fictions

English 122aR. ☐ Not offered 1983-1984
Old English

English 122b. ☐ Not offered 1983-1984
Old English Epic

English 127a. ☐ Not offered 1983-1984
D.H. Lawrence and Virginia Woolf

English 127b. ☐ Not offered 1983-1984
Contemporary Fiction
 American fiction after World War II, its stylistic innovations and thematic concerns: the profusion of order and the outbreak of disorder, apocalypse and recovery, innovation and restraint. Authors include Mailer, Warren, Welty, Ellison, O'Connor, Nabokov, Bellow, Hawkes, Cheever, Barth, and Pynchon.
 Mr. Burt

English 129a. ☐ Not offered 1983-1984
Directed Writing: Poetry and Prose

English 129b. ☐ Not offered 1983-1984
Directed Writing: Poetry and Prose.

English 130a. ☐ Not offered 1983-1984
American Literature

English 132bR. ☐ Not offered 1983-1984
Chaucer

English 133aR. ☐ Not offered 1983-1984
Advanced Shakespeare

English 134aR.
The Women of Letters in the Eighteenth Century

Women as writers of commercial and non-commercial literature in the Restoration and Eighteenth Century: novels, plays, pamphlets, journals, diaries and letters. Issues to be explored include women's attitudes toward literary achievement and literary fame, the culture's attitudes toward women writers, the complicity of women writers in the promulgation of images of the "good women" and the extent of the reaction against such stereotypes, and women's ability to deal with markets and earn money through writing. Writers include Aphra Behn, Mary Hays, Elizabeth Griffith, Lady Mary Wortley Montagu, Elizabeth Inchbald, Ann Radcliffe, Fanny Burney, Mary Wollstonecraft, and Jane Austen.

Ms. Staves

English 135a. ☐ Not offered 1983-1984
Wordsworth to Stevens: The Continuity of Romantic Poetry

English 135bR.
Romanticism

The focus here is on Wordsworth, Blake, Keats and Shelley but we will situate these four poets in an historical perspective that will trace the development of romantic thought and writing.

Mr. Merod

English 136a. ☐ Not offered 1983-1984
Whitman and his Archive

English 137aR.
Twentieth Century Poets

Mr. Bidart

English 137bR. ☐ Not offered 1983-1984
Samuel Beckett

English 140b.
Wordsworth and Yeats

A study of the careers, major poems, ideas and forms of these two poets. The work of art in its relation to experience and performance, sensation and form, politics and personal history will be at the center of the intensive study of major poems.

Mr. Fisher

English 142a. ☐ Not offered 1983-1984
Intention and Interpretation in Medieval Literature

English 142b. ☐ Not offered 1983-1984
Medieval European Drama

English 143a.
Elizabethan and Jacobean Drama

Mr. Smith

English 143b. English Drama before Shakespeare	<input type="checkbox"/> Not offered 1983-1984	English 156a. Dissent in American Literature; From the Revolution to the Civil War	<input type="checkbox"/> Not offered 1983-1984
English 145b. Victorian Poetry and Poetics	<input type="checkbox"/> Not offered 1983-1984	English 157a. Lowell and His Generation	<input type="checkbox"/> Not offered 1983-1984
English 146b. Mark Twain and His America	<input type="checkbox"/> Not offered 1983-1984	English 157b. Modern British Drama and Theatre	<input type="checkbox"/> Not offered 1983-1984
English 147a. Faulkner, Fitzgerald and Bellow	<input type="checkbox"/> Not offered 1983-1984	English 158a. American Poetry; Pound, Eliot, and Stevens	A study of the major poets, Pound, Eliot, Stevens and others. Ms. Strom
English 147b. Modern British and American Drama	<input type="checkbox"/> Not offered 1983-1984	English 161a. Theory of the Fantastic	<input type="checkbox"/> Not offered 1983-1984
English 148b. Classical Background of English Literature	<input type="checkbox"/> Not offered 1983-1984	English 163a. Renaissance Poetry	<input type="checkbox"/> Not offered 1983-1984
English 151b. Contemporary Critical Theories; The Politics of Criticism	A course in reading and writing analytic prose. We will begin by looking at Thoreau's Walden as a representational structure and as a strategy of rhetorical entanglements designed to challenge readers by disrupting their habits of dealing with texts. That will allow us to deal the ways strong writing "educates" its audience and promotes competing interpretations. Our overall concern is to understand how reading asserts influence and what critical writing can (and cannot) accomplish. Mr. Merod	English 163b. English Renaissance Tragedy	<input type="checkbox"/> Not offered 1983-1984
English 153b. Milton	All of Milton's major poems and some smaller works in both prose and poetry will be read. Mr. Smith	English 164bR. Restoration Drama	Comedy, heroic drama and tragedy between 1160 and 1800. The course will devote some attention to the history of the plays in performance. Authors to be studied include Dryden, Etherege, Wycherly, Otway, Congreve, Vanbrugh, Lillo, Garrick, Goldsmith and Sheridan. Ms. Staves
English 155a. Women as Men of Letters in Nineteenth Century England	<input type="checkbox"/> Not offered 1983-1984	English 165a. Social Novel in the Nineteenth Century	<input type="checkbox"/> Not offered 1983-1984
English 155b. Lawrence and the Moral Tradition	A study of the attitudes, continuities and differences in the work of George Eliot, Thomas Hardy and D.H. Lawrence. We will read Adam Bede, Middlemarch, Tess of the D'Urbervilles, Jude the Obscure, Sons and Lovers, The Rainbow, Women in Love , the shorter fiction and selected essays of Lawrence. The critical arguments about this tradition will be critically examined. Mr. Goodheart	English 167a. Self-Critical Fictions	In recent years, criticism has grown both more independent of literary texts and more profoundly conscious of its own literary nature. We will explore this developing awareness in the work of several contemporary novelists: E.L. Doctorow, John Barth, Jerry Kosinski, Robert Persig, Donald Barthelme. Mr. Harpham

English 167bR. Contemporary Poetry: Poets and Poetry: Theory and Practice	The work of twentieth century (mainly contemporary) poets will be explored in conjunction with their essays, manifestos, and other statements of theory. Ms. Levertov	English 180a. The Modern American Short Story	Although this course will have occasional reference to Kafka, Chekov, Frank O'Connor and Pinter, its focus is the American story, most particularly in its 20th century evolutions. We will read Hawthorne, Melville and James to prepare for our study of Fitzgerald, Hemingway, Faulkner, Anderson, Flannery O'Connor, Cheever, Roth, Malamud, Gass, Barth, Elkin, Beattie, Carver, Jayne Ann Phillips, Hannah, Yates, Updike and others. The development of a genre will be investigated by close attention to matters of craft: narrative design, point of view, voice, exclusion, time and transition, inference, syntax. Two critical papers will be required together with a final examination. Mr. Wolff
English 168a. Native American Literature	□ Not offered 1983-1984		
English 174b. Eighteenth Century Novel	Early developments in English fiction with some attention to theories of narrative and problems in the practical criticism of the novel. Emphasis on Defoe, Richardson, Fielding, Sterne and Austen. Mr. Hoover	English 185aR. Dickens and Dostoevsky	The course will emphasize the modes of grotesque and philosophical comedy, the representation of the city, the romantic extension of realism, and the major literary forms of the novel of ideas and the novel of social reform. While Dickens and Dostoevsky are the central writers, novels, poems and essays by other nineteenth century writers will be included. Mr. Fisher
English 175b. City and Psyche in Victorian Literature	□ Not offered 1983-1984		
English 176a. Hawthorne and Melville	□ Not offered 1983-1984	English 187a. The Modern Novel I	A course in the major novelists of the early 20th century, stressing their experiments with narrative technique, with the emergence of particular "modern" attitudes towards art, and with the concerns and preoccupations of artists of the period. To include: Conrad, Joyce, Stein, Mann, Lawrence, Woolf, Proust, Kafka, Gide, Hemingway, Faulkner, Nabokov. Mr. Onorato
English 176b. Hawthorne, Melville and Poe	□ Not offered 1983-1984	English 187b. The Modern Novel II	□ Not offered 1983-1984
English 177a. American Gothic and American Romance	This course examines Gothic fiction as a method of exploring the capacities of the imagination, disclosing its power, and meeting its threat. We will begin with the 19th century founders of the genre in America: Brown, Poe, Hawthorne, Melville and James. The second half of the course will deal with some 20th century masters: Faulkner, Warren, O'Connor, Oates and McCarthy. Mr. Burt	Seminars	
English 177b. Contemporary Women Writers	In this course we will explore the trend toward the fantastic in contemporary women writers as an outgrowth of the literature of alienation and complaint as it appears in Emily Dickinson, Kate Chopin and Virginia Woolf. Doris Lessing, Adrienne Rich, Piercy, Redmon and Morrison, among others, attempt to repair this sense of homelessness by making new worlds to accommodate modes of seeing and feeling which forced those earlier writers into exile from the "reality" of the man-made world. We will evaluate strategies for social change as pressures affecting the evolution of women's writing, but our main focus will be on the new literary forms forged in this quest for inhabitable worlds. Ms. Strom	English 200a. Methods of Literary Study: Shakespeare	Required of all first-year students. Mr. Hoover
		English 225b. Victorian Novel	Mr. Preyer
		English 226b. Whitman and Dickinson	Mr. Grossman
		English 232a. Chaucer	Chaucer looks back to the Medieval traditions he summarizes and criticizes, and forward to an unknown and changing audience. Both perspectives affect his narrative art and his ideas (including his ideas about the production and interpretation of narrative). We will study how he repeats and reworks literary conventions, and Medieval thought on religion, politics, aesthetics, and hermeneutics. Readings will include his major works and selections from some of his sources. Mr. Ferster

English 233b. Shakespeare	Mr. Levitan	English 352-369a and b. Directed Research	352a and b. Mr. Goodheart 353a and b. Mr. Hoover 354a and b. Mr. Preyer 355a and b. Mr. Smith 356a and b. Mr. Swiggart 357a and b. Mr. Grossman 358a and b. Mr. Gilmore 359a and b. Ms. Klein 360a and b. Mr. Levitan	361a and b. Mr. Onorato 362a and b. Ms. Staves 363a and b. Mr. Schenker 364a and b. Ms. Ferster 365a and b. Mr. Fisher 366a. Ms. Levertov 367b. Mr. Wolff 368a and b. Mr. Burt 369a and b. Mr. Merod
Directed Research				
English 237a. The Theory and Practices of the Novel	A study of major statements of the theory of the novel, including selections from the works of Aristotle, James, Lubbock, Auerback, Watt, Booth, Barthes and Genette. We will judge theory in the light of practice and practice in the light of theory. Mr. Goodheart			
English 247a. Four American Authors: Melville, James, Faulkner and William Carlos Williams	Williams' poetry, two Faulkner novels (The Sound and the Fury and As I Lay Dying) and short fiction by Melville and James will be given close study. Issues to be discussed include the nature of literary interpretations and the elements of self-consciousness (about literature, about language) in the work of these authors. Mr. Swiggart	English 402-417. Dissertation Research	402. Mr. Goodheart 403. Mr. Hoover 404. Mr. Preyer 405. Mr. Smith 406. Mr. Swiggart 407. Mr. Grossman 408. Mr. Gilmore 409. Ms. Klein	410. Mr. Levitan 411. Mr. Onorato 412. Mr. Staves 413. Mr. Schenker 414. Ms. Ferster 415. Mr. Fisher 416. Mr. Merod 417. Mr. Burt
English 295b. Studies in a Major Text	Required of all first year students. Mr. Staves			

French

See Joint Program of Literary Studies (page 59).

German

See Joint Program of Literary Studies (page 59).

History

See Comparative History (page 45).

History of American Civilization

Objectives

The graduate program in the History of American Civilization, leading to the degree of Doctor of Philosophy in History, has been designed primarily to educate professional scholars and teachers of American history. The curriculum emphasizes both a comprehensive understanding of American history and the mastery of historical research and writing. For a comparative view of the American experience, students will undertake selective studies in modern European, Asian, Latin American or African history. A related field of study will be defined, according to individual background and interest, in one of the following ways:

1. Training in one of the disciplines of the social sciences or humanities — politics, international relations, or literature, for example — to provide perspectives and methods that can illuminate historical problems.

2. A thematic field in American history, involving a distinctive subject matter and discipline: for example, American social history, American legal and constitutional history, American intellectual history, or American art and architecture.

3. A topic in comparative history, involving a distinctive subject matter and discipline: 20th century British and American literature, for example, or 19th century emigration/immigration, or 18th century American and European political and social philosophy.

A small, select student body works closely with the faculty in independent reading and research courses. From the beginning, individual programs are developed to prepare stu-

dents for their qualifying examinations and to guide them toward their dissertation research. Normally, the first year's work is concentrated in American history, including substantial experience in directed research and a critical approach to problems of historiography. Second-year students, while pursuing further directed research, chiefly are encouraged to choose courses to complete their preparation in the examination fields. Studies in related fields are arranged individually with appropriate members of the University's graduate faculty, either through standard courses or directed readings. For selected students with appropriate qualifications, there are opportunities for advanced study and research with distinguished scholars at neighboring universities in such fields as legal history and business history. Applicants should note with care the four parts of the examination, specified under *Degree Requirements*, in which all students are expected to demonstrate proficiency.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply to candidates for admission to this program. An undergraduate major in history is the preferred preparation for admission, and the student's undergraduate curriculum should include some fundamental courses in American history and related fields in the social sciences or humanities. Students with the M.A. in history, or a professional degree in law or other related fields, are especially invited to apply. Students interested in Crown Fellowships or in the special arrangements for study in professional fields at neighboring universities, noted above, should submit applications by February 15.

Faculty

Executive
Committee and Staff

Professor
Marvin Meyers,
Chair:
Ideas and politics.
Jacksonian America.

Professor
David H. Fischer:
Social and political
structure. Early
Republic.

Professor
Morton Keller:
Legal and political
institutions. Modern
America.

Assistant Professor
Alexander Keyssar:
Labor and working-
class. Modern
America.

Professor
John P. Demos:
Family and commun-
ity. Colonial America.

Associate Professor
Gerald S. Bernstein:
American art and
architecture.

Assistant Professor
**James T.
Kloppenber:**
Modern intellectual
history.

Degree Requirements

Master of Arts

No one will be accepted in the program who is not a doctoral candidate. Applications from persons seeking a terminal M.A. degree are not welcome. However, the M.A. degree in History may be awarded to those who (1) have successfully completed one full year of residence at Brandeis University (eight half-courses), including two 200-level research courses, and (2) have passed the foreign language requirement.

Doctor of Philosophy

Program of Study.

Doctoral candidates must complete two years in residence at Brandeis, and a minimum of sixteen half-courses. Programs of study and concentration will be formulated for each student, subject to the approval of the Executive Committee. Students will be required to maintain an average of B- or better in order to continue in the program. Continuance of fellowship support requires an average of A- or better. Incoming students normally will be expected to take one full course of Directed Research in American History in their first year of residence. The Committee may, at its discretion, grant a student transfer credit of up to one year toward the Ph.D. residence requirement for relevant graduate or professional work done elsewhere. Application for such credit shall be considered only after a student has completed one semester's residence in a full-time program. The second 200-level Directed Research course may be waived by the committee on the basis of a master's thesis or comparable research project at the graduate or professional level done elsewhere.

Language Requirement.

A high level of reading proficiency in one foreign language is required of all students. Students are expected to pass the language examination during the first year of residence. A student who has not passed the foreign language examination by the end of the first year is not eligible for financial aid from the University for the second year. The completion of language requirements at another university does not exempt the candidate from the Brandeis requirement.

Quantitative Methods.

All students in the program are urged, but not required, to attend the summer training in quantitative methods at the Newberry Library, Chicago, Illinois. In the past years, limited funds have been made available to defray expenses of students who choose to participate in the program.

Qualifying Examination.

Each doctoral candidate must pass at the doctoral level a qualifying examination in the following four fields: (1) general American history, one examiner will be in early American history and the other in modern American history; (2) a period of specialization in American history; (3) an area of comparative modern European, Asian, Latin American or African history; (4) a related field of study, involving one of the disciplines in the social sciences or the humanities. (Note the three alternative approaches for the fourth field specified under Objectives.) The period of specialization will

normally be selected from the following: 1607-1763, 1763-1815, 1815-1877, 1877-1914, 1914-present. The special period may be redefined on request, for good academic reasons. All proposed fields must be submitted in writing and approved by the Executive Committee. Students entering the program without previous graduate training in American history are expected to take the Qualifying Examination no later than the end of their fifth semester of residence and must pass the examination by the end of the sixth semester. Students who have earned an M.A. in history elsewhere, or who have one year of transfer credit for work taken elsewhere, are expected to take and pass the Qualifying Examination by the end of their second year in the program.

Unless the student elects a single three-hour oral examination on all four fields, the Qualifying Examinations will be taken separately in each of the fields, with the general American field coming at the end. For each of the fields (2), (3), and (4), as above, the student will choose one appropriate professor with the approval of the chairman of the program. That professor, in consultation with the student, will define the requirements, course of preparation, and mode of examination (written and/or oral) for the field.

For the general American field, the Chairman will appoint two members of the Executive Committee as examiners. The student may choose a one-hour oral examination or a three-hour written examination followed, if the examiners so require, by an oral examination. In either case, the two professors in consultation with the student will define in advance the major themes or problems on which the examination will be based. So far as possible, fields (3) and (4), as above, should be selected with a view to broadening and deepening the student's understanding of his or her American history fields, and providing valuable background for the dissertation work.

With the consent of the Chairman and the professor concerned, qualified students in appropriate cases may be examined in fields (3) or (4), as above, by a faculty member at another university. Moreover, with the consent of the Executive Committee, examinations in fields (3) or (4), as above, may be waived for students with the M.A., J.D., or other advanced degrees that represent a level or kind of training and achievement fully equivalent to those required in the Brandeis examinations for those fields.

Admission to Candidacy.

A student may be admitted to candidacy for the Ph.D. degree upon satisfactory completion of the following: course and residence requirements, demonstration of a high level of proficiency in one foreign language, the qualifying examinations, and when the prospectus for a dissertation is approved by the Executive Committee.

Dissertation and Defense.

When the dissertation is accepted by the Committee, a final oral examination will be scheduled at which the candidate must successfully defend his or her dissertation before the Committee and other members of the faculty who may participate. After a candidate has successfully defended the dissertation, he or she will give a public lecture.

Courses of Instruction

History 190a.
Historiography A critical analysis of classical historiography.
Mr. Fischer

History 200a.
Colloquium in American and European Comparative History Since the 18th Century Comparative examination of major historical issues in Europe and the United States from the eighteenth through the twentieth centuries. *Required of first-year graduate students in the History of American Civilization and Comparative History programs.*
Mr. Schuker

History 201b.
Colloquium in American and European Comparative History An introduction to the major issues and methods in the social history of Europe and the United States during the early modern and modern periods.
Mr. Schneider

History 202bR.
Seminar in Comparative History: Town and Country □ Not offered 1983-1984

History 203b.
Seminar in Comparative History: Death in History Introduction to the methods of Comparative History through a consideration of the history of death.
Mr. Cohn

History 201aA-209aA.
Directed Research in American History Students will normally elect one of the following in the fall term of the first and the second years. Each is designed to provide experience in designing, researching and writing a substantial essay of a monographic character, based on extensive use of sources. This is the equivalent of a full course and extends the due date for the final draft of the paper to March 1, to permit sufficient time for a major project. Specific research topics are selected by the student in consultation with the professor.

201aA.
Topics in American Art and Architecture Mr. Bernstein

203aA.
Topics in American Colonial History Mr. Demos

204aA.
Topics in Social History, with Emphasis on the Early Republic Mr. Fischer

205aA.
Topics in Modern America Mr. Keller

207aA.
Topics in Political and Social Thought, with Emphasis on the Period 1750-1850 Mr. Meyers

208aA.
Topics in Modern American Labor: Working-Class History Mr. Keyssar

209aA.
Topics in Modern Intellectual History Mr. Kloppenberg

History 301-309.
Readings in the History of American Civilization The following are available in either semester:
301a or b. Mr. Bernstein
303a or b. Mr. Demos
304a or b. Mr. Fischer
305a or b. Mr. Keller
307a or b. Mr. Meyers
308a or b. Mr. Keyssar
309a or b. Mr. Kloppenberg

The following courses are offered on a regular basis to groups of students who wish to use them in order to prepare for their general examinations.

History 313-319.
Readings in the History of American Civilization

313a or b.
Colonial History, 1607-1750 Mr. Demos

314a or b.
American Social History, 1750-1870 Mr. Fischer

315a or b.
Political History, 1870-present Mr. Keller

317a or b.
American Intellectual History, 1750-1870 Mr. Meyers

318a or b.
American Social History, 1870-present Mr. Keyssar

319a or b.
American Intellectual History, 1870-present Mr. Kloppenberg

History +01-+09.
Dissertation Research +01. Mr. Bernstein
+03. Mr. Demos
+04. Mr. Fischer
+05. Mr. Keller
+07. Mr. Meyers
+08. Mr. Keyssar
+09. Mr. Kloppenberg

For courses available to History of American Civilization students in other historical areas, see the listings by department and programs in the Graduate School and College catalogs, especially under Comparative History.

In addition, the following courses may be taken as equivalent to History of American Civilization seminars:

History 150a. □ Not offered 1983-1984

**Colonial America:
People, Culture and
Society**

History 151a.
**Revolution and Con-
stitution: Founding
the American
Republic**

Mr. Meyers

History 151b. □ Not offered 1983-1984

**Male and Female in
the American Past**

History 152b. □ Not offered 1983-1984

**Democracy in
America: Tocque-
ville and The Age of
Jackson**

History 154b. □ Not offered 1983-1984

**The History of Mod-
ern America**

History 156a. □ Not offered 1983-1984

**American Social
History, 1750-1860**

History 156b. □ Not offered 1983-1984

**American Society:
An Analytical His-
tory, Civil War to
the Present**

History 158a. □ Not offered 1983-1984

**Working Class His-
tory in the United
States**

History 158b. □ Not offered 1983-1984

**The United States in
the 1930s**

History 159a. □ Not offered 1983-1984

**Immigration and
Immigrants in
American History**

History 159b. □ Not offered 1983-1984

**Family and Society
in American History**

History 160a.
Adams and America Mr. Meyers

History 161a. □ Not offered 1983-1984

**The American Polit-
ical Tradition: Orig-
ins of the Civil War**

History 161b. □ Not offered 1983-1984

**The American
Polity**

History 162b. □ Not offered 1983-1984

**The American Polit-
ical Tradition Since
the Civil War**

History 163aR.
**American Foreign
Relations in the
Twentieth Century** Mr. Schuker

History 167b.
**Topics in American
Legal History** Mr. Keller

History 168a. □ Not offered 1983-1984

**American Politics
and Ideas,
1890-1930**

History 169aR.
**Thought and Cul-
ture in Modern
America** Mr. Kloppenberg

History 191a.
**History and
Psychology** Mr. Demos

Joint Program of Literary Studies

Comparative Literature, French, German, Russian and Spanish

Objectives

The joint program of literary studies accepts students desirous of obtaining an M.A. and/or Ph.D. degree in one of the areas listed above. Interdisciplinary in design, the program aims to train literary scholars and teachers whose professional capabilities will be broader than their individual specialties. Students will have the opportunity to study the theory of literature, history and theory of literary criticism, and scholarly methodology in addition to the specific literatures in which the degree will be earned. A small and carefully selected student body will work closely with the faculty of the program and with one another in a core curriculum before specializing. Students are encouraged to plan an individual program of studies within their field of interest in consultation with their adviser(s). Although the program encourages individual initiative, with the advice and consent of adviser(s), it should be stressed that all students, whatever their areas, must master the basic literature, primary and secondary, in their field. The General Examinations will assume both breadth and depth of such knowledge. (Reading lists for each area are available.)

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. Applications must be received no later than March 1. Please be sure to mark clearly the **area** of your choice (Comparative Literature, French, German, Russian or Spanish) on the application form. Each applicant must submit one or more college-level essays on a literary subject (one of which should be written in English) as a sample of work.

Faculty

Committee:
Professor
Harry Zohn,
Chair
(German)

Professor
Edward Engelberg
(Comparative
Literature)

Professor
Denah Lida
(Spanish)

Professor
Murray Sachs
(French)

Associate Professor
Robert Szulkin
(Russian)

In addition, all faculty members of the Departments of Germanic and Slavic Languages and Romance and Comparative Literature participate in this program.

Degree Requirements

Master of Arts

Students who have completed two years of full-time study in residence may be awarded the M.A. degree. Such students must be in good standing (no incompletes). In addition, such students must have passed the language requirement, either by certification and/or examination, as follows: single area candidates: **one** foreign language **other** than the major language. Finally, such students must have passed satisfactorily the Qualifying Examinations.

Doctor of Philosophy

Program of Study.

Individual programs of study will be arranged between students and their advisers. The core curriculum consists of several elements: all students in the program are obligated to enroll in Literary Studies 201 (The History and Theory of Criticism); all students will be held responsible for certain works on literary theory, literary history and aesthetics (not studied in the criticism seminars) at the time of General Examination.

Although the program is designed to permit students to develop their studies coincident with their interests and talents, and in consultation with their adviser(s), full-time students are expected to enroll in at least **three** literary studies seminars each year during the first two years of residence. In addition to Literary Studies 201, first-year students are expected to augment this schedule with **at least two** additional seminars from the literary studies offering.

Residence Requirements.	The minimum residence requirement is two years of full-time study beyond the bachelor's degree. Additional course work during the third year is generally recommended.	Dissertation and Defense.	The completed dissertation must be read and found acceptable by its director and two other readers before the candidate is eligible for the Final Oral Examination. The Final Oral Examination will be conducted by a committee of not less than four, one of whom must come from outside the candidate's area.
Language Requirement.	Students will be asked to demonstrate a reading competence in at least two foreign languages to be determined in consultation with their advisers. In certain areas of specialization, additional languages (e.g., Latin) may become necessary research tools. (Comparative literature students should consult the special statement of language requirements below.) Students must be certified in at least one language by the end of the first year in residence.	Teaching.	All students in the program are expected to do some supervised teaching, either as a teaching assistant or by means of other arrangements. In some areas, where teaching assistantships may at times be unavailable, students will be expected to fulfill some teaching opportunities (occasional class lectures, for example) without remuneration.
Qualifying Examinations.	Qualifying examinations must be taken at the start of a student's second full year in residence, with the purpose of determining that the student is qualified to study literature productively at the graduate level. Only students who have a complete and satisfactory record for their first year will be permitted to take the Qualifying Examinations. No postponement of these examinations is allowed. The examinations are both written and oral, and will be scheduled each year for the third or fourth week in September. The examinations are prepared and conducted by a three-member faculty committee chosen at the end of the first year of study by the candidate in consultation with the candidate's faculty adviser. At the outcome of the examination, the candidate receives a detailed written evaluation from the three-member committee, based on the written and oral performances and on the entire record of the candidate's first year in residence.	For Candidates in Comparative Literature.	<p>1. Any student in the program who declares candidacy in comparative literature should decide, as soon as possible, on a major and minor literature. The major literature must be one of those offered by either the Department of Germanic and Slavic Languages or Romance and Comparative Literature (but not Italian). The minor literature may be Italian, English, American or any other literature offered by the University. Exact "proportions" cannot be stated in advance and will be worked out in consultation between students and adviser(s).</p> <p>2. Candidates in comparative literature are expected to take three language examinations follows:</p> <p>a. The major language, which should be near level of mastery (reading, writing and speaking) on acceptance to the program. Students may simply be "certified" for this language if their level of competence is obvious.</p> <p>b. The second foreign language should be mastered as a reading language with a fluency that will permit easy access to all primary and secondary literature in the specified area.</p> <p>c. The third foreign language should be a reading tool for primary and especially secondary materials.</p> <p>It is quite possible that for certain areas of specialization — Medieval, Renaissance, etc. — additional languages will become necessary (e.g., Latin, Catalan, Old French).</p>
General Examinations.	Students may take the General Examinations, which demonstrate full competency in their chosen discipline, whenever they and their advisers feel they can appropriately do so. However, all students are expected to have completed the General Examinations no later than the fall semester of their fourth year in residence. Examinations will be offered twice each academic year, in October and May, and will consist of three written examinations and an oral examination. Details about the contents and procedures are available on request.		
Admission to Candidacy.	Candidates will be recommended for admission to doctoral candidacy when the residence and language requirements have been met, the General Examinations have been successfully passed, and a prospectus of the candidate's proposed dissertation topic has been approved by a committee of the area concerned.		

Courses of Instruction

Literary Studies 201a.
**History and Theory
of Criticism: The
Development of
Modern Critical
Theories**

Mr. Gendzier

Literary Studies 202bR. □ Not offered 1983-1984
**Fiction: Theory and
Practice**

Literary Studies 203aR. □ Not offered 1983-1984
**Romantic
Phenomena**

Literary Studies 204bR. □ Not offered 1983-1984
**Theory and Practice
of Literary
Translation**

Literary Studies 205a. □ Not offered 1983-1984
**Crosscurrents in the
French and English
Enlightenments**

Literary Studies 206b. □ Not offered 1983-1984
**The Comic in Liter-
ature: Theory and
Practice**

Literary Studies 207a. □ Not offered 1983-1984
**Marxist Criticism:
Literature and
Society in Early
Modern Europe**

Literary Studies 208b. □ Not offered 1983-1984
**Cervantes in his
European Context:
Heritage and
Lineage**

Literary Studies 209aR. □ Not offered 1983-1984
Modern Phenomena Mr. Engleberg

Literary Studies 210b.
**Genesis and Devel-
opment of a Myth:
Don Juan** Ms. Lida

Literary Studies 211a. □ Not offered 1983-1984
**The Tragic in
Literature**

Literary Studies 212b. □ Not offered 1983-1984
**Techniques of Sty-
listic Analysis**

Literary Studies 213b. □ Not offered 1983-1984
**Modes of the Gro-
tesque in Art and
Literature**

Literary Studies 214a.
**Biography-
Autobiography and
Related Genres** Ms. Lida

Literary Studies 301-305.
**Readings in Area
Studies: Tutorials**

301a and b.
**Comparative Litera-
ture. Readings in
Comparative Texts** Mr. Engelberg and Staff

302a and b.
**French. Readings in
French Texts** Mr. Sachs and Staff

303a and b.
**German. Readings in
German Texts** Mr. Zohn and Staff

304a and b.
**Russian. Readings in
Russian Texts** Mr. Szulkin and Staff

305a and b.
**Spanish. Readings in
Spanish Texts** Ms. Lida and Staff

Literary Studies 351-355.
Directed Research
Open to advanced graduate students with the consent of the instructor and the chairman of the Literary Studies Program.

351a and b.
**Comparative
Literature** Mr. Engelberg and Staff

352a and b.
French Mr. Sachs and Staff

353a and b.
German Mr. Zohn and Staff

354a and b.
Russian Mr. Szulkin and Staff

355a and b.
Spanish Ms. Lida and Staff

Literary Studies 400.
**Dissertation
Research** Staff

Following is a list of selected courses in each of the areas that constitute the Joint Program of Literary Studies, which may be of special interest to graduate students. For a full list of all courses available consult the undergraduate catalog under Departments of Germanic-Slavic Languages and Romance and Comparative Literature.

Comparative Literature

Comparative Literature 102aR. The Medieval Vision of Love

The Middle Ages bequeathed a unique kind of love based on a delicate balance between sexual desires and other feelings. We shall examine texts that, by form as well as content, discuss the relationship of this love to other kinds such as physical passion, platonic friendship, marital love and Christian charity. Music, art, and influence on subsequent European literature also considered. Readings from the Troubadours, Chretien de Troyes, *The Romance of the Rose*, The Tristan legend, Dante, Petrarch, Chaucer, the Gawain poet.

Ms. Joseph

Comparative Literature 103b. Madness and Folly in Renaissance Literature

□ Not offered 1983-1984

Comparative Literature 104a. France and England: Rationalism and Revolution

□ Not offered 1983-1984

Comparative Literature 105b. Crisis of Conscience: 1715-1830

□ Not offered 1983-1984

Comparative Literature 106a. The Age of Doubt: European Romanticism

This course examines the crisis of faith, and sometimes the direct challenge to God, which dominates much of the literature and thought of the nineteenth century. Is there a God? What substitutes for faith? What are "right" values? Our authors confront both themselves and the abyss of nothingness. Readings in Goethe, Byron, Dostoevsky, Bronte, Turgenev, Ibsen, Rimbaud, Nietzsche.

Mr. Engelberg

Comparative Literature 107b. The Age of Irony: European Modernism

This course explores the predominance of irony as a major mode of expression in modern art. Irony wears many masks: it often joins the tragic of the comic, deflates the pretentious, and permits the artist to manipulate not only the elements of the art but also its audience. Readings in Flaubert, Chekhov, T.S. Eliot, Virginia Woolf, Hesse, Pirandello, Mann, Camus.

Mr. Engelberg

Comparative Literature 110b. The Development of a Genre

□ Not offered 1983-1984

Comparative Literature 121b. Dancing the Orange: Studies in Poetic Resonance

□ Not offered 1983-1984

Comparative Literature 125a. Women in Literature

□ Not offered 1983-1984

Comparative Literature 137aR. Dada and Surrealist Practice

In an effort to understand the impact on contemporary poetry of these movements "from within," major works by Jarry, Tzara, Apollinaire, Breton, Eluard and Arp will be read. Students will be asked to experiment with creative techniques, such as collage and composition by chance and association, originally explored by these poets and still important today. The course will end with readings of recent poets like O'Hara and Cage who demonstrate the vigor and viability of a tradition that originated at the Cafe Voltaire in Zurich in 1913.

Mr. Yglesias

Comparative Literature 141b. The Picaresque Novel

□ Not offered 1983-1984

Comparative Literature 144b. The Outsider as Artist and Lover

□ Not offered 1983-1984

Comparative Literature 145aR. In Praise of Folly

Study of Erasmus' *Moriae Encomium* and a selection of some of the great wise fools which western literature has bequeathed us: *Don Quixote*, *The Idiot*, Pirandello's *Henry IV*, *The Madwoman of Chaillot* and others. Students will be given background on the theme before Erasmus, the influence of the Dutch philosopher on 16th-century Europe, and the continuity of the tradition.

Ms. Lida

Comparative Literature 152a. Critical Approaches to Literature

□ Not offered 1983-1984

Comparative Literature 170b. Modern Tragedy

□ Not offered 1983-1984

Comparative Literature 174a. Sex, Class and Literature in Europe, 1830-1914	An examination of social change and literary production in Europe during a period of political and industrial revolution. Emphasis will be on sexual, family and class relationships, and on the social role of the female writer. Authors include: Charlotte Bronte, Elizabeth Gaskell, George Eliot, Engels, Freud, Flaubert, Gorky, Shaw, Gertrude Stein.	Comparative Literature 199b. The Roots of Literature	□ Not offered 1983-1984
	Ms. Harth	French	
Comparative Literature 175b. The psychological Novel	□ Not offered 1983-1984	French 109b. Contemporary French Civilization	This course is designed for those who seek to acquire a working knowledge of the social, cultural, economic and political context of contemporary France, while seeking, at the same time, to develop fluency in French. It is also of interest to students contemplating study abroad, as well as careers in international business, government and law. The course centers around thematic dossiers composed of recent essays and press articles, slides, films and recordings.
Comparative Literature 180a. Versions of the "Absurd"	□ Not offered 1983-1984		Ms. Marx-Scouras
Comparative Literature 185a. Dickens and Dostoevsky	□ Not offered 1983-1984	French 112a. The French Middle Ages	An introduction to the language and literature of France from the twelfth to the fifteenth centuries. The course will concentrate on the principal genres (epic, romance, lyric, tale and drama) and the major themes (adventure, chivalry, love, magic, religion) of the period.
Comparative Literature 186a. Sex and Sensibility in Pre-Revolutionary European Novels	This course will study the concept of human nature with a specific attention to whether people can be educated to control or influence their erotic feelings and states of happiness. We shall trace the roles of family, money, personal identity, and social norms in structuring the eighteenth-century novel. The course will focus on the birth of the novel and of romanticism. Required texts: Richardson, <i>Clarissa</i> ; Fielding, <i>Tom Jones</i> ; Sterne, <i>Tristan Shandy</i> ; Diderot, <i>The Nun</i> ; Laclos, <i>Dangerous Liaisons</i> ; Sade, <i>Justine</i> .		Ms. Boulton
	Mr. Gendzier	French 116b. The French Renaissance	□ Not offered 1983-1984
Comparative Literature 187b. Fictive Knowledge in the Twentieth Century	□ Not offered 1983-1984	French 117aR. French Classicism	An inquiry into the nature of classicism in seventeenth century France with close study of representative authors such as Corneille, Racine, Molière, Pascal, Boileau, La Fontaine, Mme. de La Fayette, La Rochefoucauld, La Bruyère.
Comparative Literature 192a. The Faust Theme in European Literature	□ Not offered 1983-1984		Ms. Harth
Comparative Literature 193a. Native American Literature	□ Not offered 1983-1984	French 118b. The French Enlightenment: Mirrors and Masks in Eighteenth-Century French Fiction	□ Not offered 1983-1984
Comparative Literature 195a. Crime and Punishment: Variations on a Literary Theme	□ Not offered 1983-1984	French 119a. French Romanticism	□ Not offered 1983-1984
		French 123b. The Feminine Tradition in French Literature	□ Not offered 1983-1984
		French 125a. French Poetry from the Middle Ages to the Revolution	□ Not offered 1983-1984

French 138bR. Nineteenth Century French Fiction	By focusing on the great landmark achievements in the novel, (by Stendahl, Balzac, Flaubert and Zola), and the finest short stories (by Merimee, Balzac, Flaubert and Maupassant), this course will seek to discover why fiction grew to be the dominant literary form of the nineteenth century in France, and why realism was the aesthetic ideal of the age. All readings in French. Conducted in French.	French 180b. Modern French Critical Thought	Nineteenth-century French writers explored the dimension beyond the visible world in symbol and myth . Baudelaire's poetry and art criticism, and its influences, will help trace the Romantic beginnings of symbolism through decadence, naturalism and realism. The duality between the material and supranatural worlds as expressed in poetry, the novel, opera and painting provides the course's rationale. Authors include Nerval, Baudelaire, Verlaine, Rimbaud, Mallarme; Wagner's opera, Tannhauser ; paintings by Delacroix, Ingres, Daumier, Moreau.
French 140b. Twentieth Century French Theater	□ Not offered 1983-1984	Mr. Sachs	Mr. Kaplan
French 149aR. Twentieth Century French Fiction	The development of the twentieth-century novel in France is closely related to the theoretical concerns of the surrealists, the existentialists, the "nouveaux romanciers," and, most recently, the deconstructionists. These terms must be employed loosely, but throw light on the continuity and discontinuity in the French novel from the "roman traditional" to Blanchot's "livre a venir." We will read novels by Camus, Sartre, Mauriac, Malraux, Gracq, Queneau, Vian, Robbe-Grillot, Beckett and Blanchot.	German	
French 150b. Modern French Poetry	□ Not offered 1983-1984	German 102aR. German Literature before 1700	Lectures and readings in German. Though the emphasis will be on Minnesang, the Middle High German epics, and Baroque literature, there will be some attention to the Gothic and Old High German periods as well as to the literature of the Reformation. To be announced
French 155aR. Literature and Ideology	A survey of the evolution of contemporary French literature and intellectual thought covering such literary and philosophical currents as surrealism, existentialism and "engagement," Marxism, structuralism and feminist writing. We shall focus on the interrelationships between language and power, literature and politics. Authors include: Breton, Celine, Camus, Beauvoir, Sartre, Foucault, Kristeva.	German 110a. Introduction to the Life and Works of Goethe	Intensive study of many of Goethe's dramatic, lyric and prose works, including Gotz, Werther, Faust I and a comprehensive selection of poetry; lectures and readings in German.
French 160a. From Anti-Rationalism to "Engagement" in Modern French Literature	□ Not offered 1983-1984	German 120a. Enlightenment, Storm and Stress, Idealism; Lessing, Lenz, and Schiller	A survey of the literary and intellectual movements—Enlightenment, Storm and Stress, Idealism—that eventually culminated in German classicism. Emphasis will be on close analysis of representative works by Lessing, Lenz and Schiller.
French 170b. The Moralistic Tradition in French Literature	□ Not offered 1983-1984	German 130b. German Romanticism	Mr. Zohn
		German 140a. German Literature in the Nineteenth Century	□ Not offered 1983-1984
		German 150a. The Jewish Contribution to German Literature	□ Not offered 1983-1984
		German 160b. German Drama and Lyric Poetry from Naturalism to the Second World War	A survey of major trends in these genres with an emphasis on close analysis of selected works by such writers as Hauptmann, Hofmannsthal, Schnitzler, Kaiser, Brecht, Rilke, George and Benn.

Mr. Zohn

German 170b. German Literature Since the "Year Zero" (1945)	□ Not offered 1983-1984	Russian 130a. Nineteenth Century Russian Literature	A comprehensive survey of the major writers and themes of the nineteenth century, including Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov and others. Conducted in English. Readings available in Russian and in English translation.
German 180a. Twentieth Century Prose: Mann, Kafka, Hesse	□ Not offered 1983-1984		Mr. Szulkin
German 190bR. Vienna at the Turn of the Century	The literary and cultural scene in imperial Vienna during the final decades of Franz Joseph's reign will be explored through the works of such writers as Schnitzler, von Hofmannsthal, Zweig, Altenberg, Herzi and Kraus. Attention will be paid to the relationship between men of letters and innovative thinkers, artists and musicians like Freud, Wittgenstein, Klimt, Loos, Schiele, Mahler and Schoenberg.	Russian 134b. Stories and Plays of Chekhov	□ Not offered 1983-1984
	Mr. Zohn	Russian 145b. Nabokov	□ Not offered 1983-1984
German 195b. The Culture of the Weimar Republic	□ Not offered 1983-1984	Russian 146a. Dostoevsky	□ Not offered 1983-1984
Italian		Russian 148a. Survey of Russian Theater from 1719 to 1917	□ Not offered 1983-1984
Italian 110b. Modern Italian Literature	□ Not offered 1983-1984	Russian 148bR. A Survey of Twentieth Century Russian Theater: Chekhov to the Present	History and development of Russian drama from Chekhov to the present. Conducted in English. Readings available in Russian and in English translation.
Italian 140a. Dante's <i>Divine Comedy</i>	A close study of the entire poem — <i>Inferno</i> , <i>Purgatorio</i> , <i>Paradise</i> — as a symbolic vision of reality reflecting the culture and thought — political, philosophical, theological — of the Middle Ages. Readings will include two minor works, the <i>Vita Nuova</i> and <i>On Monarchy</i> . No knowledge of Italian is required.	Russian 149b. Twentieth Century Russian Literature, Art and Theater	The course will examine three decades (1900-1930) in Russian culture. A variety of artistic movements (Futurism, Constructivism, Cubism, Surrealism) will serve as the unifying theme of the course. We will explore the interrelationships between these artistic movements and history and politics. Guest lecturers will participate in the course.
	Mr. Lansing		Mr. Szulkin
Russian		Russian 161b. The Structure of Modern Russian	□ Not offered 1983-1984
Russian 110a. Advanced Readings in Russian	□ Not offered 1983-1984		
Russian 112b. Theory of Language (Proto-Slavic)	□ Not offered 1983-1984		
Russian 117a. Pre-Nineteenth Century Russian Literature	□ Not offered 1983-1984		

Spanish	Spanish 162b. Studies in Argentine and Brazilian Literature	□ Not offered 1983-1984
Spanish 120a. Cervantes: In Depth Study of <i>Don Quixote</i>		□ Not offered 1983-1984
Spanish 125a. The Seventeenth Century	Spanish 163b. Colonial and Nineteenth Century Latin American Literature	The Spanish literary tradition (i.e., epic poetry, picaresque novel, <i>costumbrismo</i> , romanticism), and its evolution in Latin America in representative works, beginning with indigenous artistic expression and the perspectives offered by the literature of the exploration. Mr. Duffy
Spanish 130a. Nineteenth Century Spanish Literature		□ Not offered 1983-1984
Spanish 140a. Masters of Spanish Poetry	Spanish 170b. The Generation of 1898	Conducted in English. Readings available in Spanish and English. Mr. Duffy
Spanish 150a. Spanish Drama of the Siglo de Oro	Spanish 180b. Twentieth Century Spanish Literature	□ Not offered 1983-1984
	Spanish 181a. Revolt in Spain: Literature and Painting	We will examine representative works dealing with class struggle, political and religious conflicts, revolt in search of justice and freedom. Spain's socio-political and artistic history is one of constant conflicting forces from the early Middle Ages to the present. These upheavals have always found expression in the highest art forms. Authors include Lope de Vega, Larra, Galdós, Blasco Ibanez and Lorca; paintings by Velasquez, Goya and Picasso. Ms. Lida
Spanish 160a. Studies in Latin America Literature I		□ Not offered 1983-1984
Spanish 160b. Readings in Latin American Literature II		□ Not offered 1983-1984
Spanish 161a. Masters of Modern Latin American Poetry		Development of twentieth-century poetics through the works of Dario, Vallejo, Neruda and Paz.

Mathematics

Objectives

The graduate program in mathematics is designed primarily to lead to the Doctor of Philosophy degree. The formal course work is devoted to giving the student a broad foundation for work in modern pure mathematics. An essential part of the program consists of seminars on a variety of topics of current interest in which mathematicians from Greater Boston often participate. In addition, the Brandeis-Harvard-M.I.T. Mathematics Colloquium gives the student an opportunity to hear the current work of eminent mathematicians from all over the world.

Admission

The general requirements for admission to graduate work in mathematics are the same as those for the Graduate School as a whole. The Department has available a variety of fellowships and scholarships for well-qualified students. To be considered for such financial support the student should submit an application by February 15.

Faculty

Professor
David Eisenbud,
Chair:
Commutative Algebra, Algebraic Geometry, Knot Theory and Singularities of Complex Varieties, C^∞ Functions.

Professor
Maurice Auslander:
Non-commutative Algebra, Homological Algebra.

Professor
Edgar H. Brown Jr.:
Algebraic Topology; Manifolds, Cobordism, Surgery, Homotopy Theory.

Professor
David A. Buchsbaum:
Commutative Algebra, Homological Algebra.

Professor
Harold I. Levine:
Differential Topology, Singularities of Differential Maps.

Professor
Jerome P. Levine:
Differential Topology, Knot Theory and Related Algebra.

Professor
Teruhisa Matsusaka:
Algebraic Geometry, Classification and Deformations of Algebraic Varieties.

Professor
Alan L. Mayer:
Classical Algebraic Geometry and Related Topics in Mathematical Physics.

Professor
Paul B. Monsky:
Number Theory, Arithmetic Algebraic Geometry.

Professor
Richard S. Palais:
Non-linear Partial Differential Equations, Calculus of Variations in Geometry of Mathematical Physics, Transformation Groups.

Professor
Gerald W. Schwarz:
Smooth and Algebraic Transformation Groups, especially Orbit Structures, C^∞ Functions on R^n .

Visiting Professor
C.S. Seshadri:
Geometric Invariant Theory, Moduli of Vector Bundles and Reductive Algebraic Groups

Visiting Professor
Pierre van Moerbeke:
Stochastic Processes, Korteweg-de Vries Equation, Toda Lattices.

Associate Professor
Mark Adler:
Analysis: Differential equations, completely integrable systems.

Associate Professor
Michael Harris:
Arithmetic of Abelian Varieties Over Number Fields, Class Field Theory, p -adic Representation Theory, L -Functions.

Associate Professor
Kiyoshi Igusa:
Algebraic K -Theory.

Assistant Professor
Jeanne Dufort:
Topology and Algebraic K -theory.

Visiting Assistant Professor
Shai Haran:
Number Theory, p -adic L -Functions and Automorphic forms for $SL_n(F)$ where F is Quadratic imaginary field.

Assistant Professor
Robert Indik:
Number Theory.

Assistant Professor
Steven Rosenberg:
Differential Geometry and Analysis of Manifolds.

Assistant Professor
James Scovel:
Geometry on Non-Linear Partial Differential Equations.

Visiting Assistant Professor
Christopher Stark:
Topology, higher dimensional Surgery, Theory, and algebraic K -Theory.

Degree Requirements

Master of Arts

1. One year's residence as a full-time student.
2. Successful completion of an approved schedule of courses.
3. Satisfactory performance in the basic courses in algebra, analysis, topology and geometric analysis —or equivalent examinations (see Program of Study).
4. Proficiency in reading French, German, or Russian.

Doctor of Philosophy

1. Residence as a full-time student for two years.
2. Successful completion of an approved schedule of courses.
3. Superior performance in the basic courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
4. Participation in the Second-Year Seminar.
5. Superior performance in the Qualifying Examination.
6. Proficiency in reading two of French, German or Russian.
7. Doctoral dissertation approved by the Department.
8. Successful defense of the dissertation.

Program of Study.

The normal first year of study consists of Mathematics 101a and b, 111a and b, and 121a and b. In exceptional circumstances and only with the permission of the graduate adviser, a student with superior preparation may omit one or more of these courses and elect higher level courses instead. In this case he or she must take an examination in the equivalent material during the first year. The second year's work will normally consist of

Qualifying Examination.

Mathematics 110a and higher level courses in addition to preparation for the qualifying examinations described below and participation in the second-year seminar. Upon completion of the qualifying examinations, the student will choose a dissertation adviser and begin work on a thesis. This should be accompanied by advanced courses and seminars.

The Qualifying Examination consists of two parts: a major examination and a minor examination. Both are normally taken in the latter part of the second year but may occasionally be postponed until early in the third year. For the major examination the student will choose a limited area of mathematics, e.g. differential topology, or several complex variables, or ring theory — and a major examiner from among the faculty. Together they will plan a program of study and a subsequent examination in that material. The aim of this study is to prepare the student for research toward the Ph.D. The minor examination will be more limited in scope and less advanced in content. The procedures are similar to those for the major examination, but its subject matter should be significantly different.

Admission to Candidacy.

To be admitted to candidacy for the Ph.D. degree in Mathematics, the student must have successfully completed the qualifying examination, must demonstrate proficiency in reading French, German or Russian and must be recommended for candidacy by the department.

Dissertation and Defense.

The doctoral degree will be awarded only after the submission and acceptance of an approved dissertation and after the successful defense of that dissertation.

Courses of Instruction

Mathematics 101a and b. Algebra I

Groups, rings, modules. Galois theory, affine rings and rings of algebraic numbers. Multilinear algebra. The Wedderburn Theorem. Other topics as time permits.

Mr. Auslander

Mathematics 110a. Geometric Analysis

Manifolds, tensor bundles, vector fields and differential forms. Frobenius theorem. Integration, Stoke's theorem, and deRham's theorem.

Mr. H. Levine

Mathematics 110b. Geometric Analysis

The correspondence between Lie groups and Lie algebras. Exponential map, homomorphisms, Lie sub groups, and homogeneous spaces. Representations of compact Lie groups.

Mr. Rosenberg

Mathematics 111a. Real Analysis

Measure and integration. LP spaces, Banach spaces, Hilbert spaces. Radon Nikodyn, Riesz representation, and Fubini theorems. Fourier transforms.

Mr. Rosenberg

Mathematics 111b. Complex Analysis

The Cauchy integral theorem, calculus of residues, and maximum modulus principle. Harmonic functions. The Riemann mapping theorem and conformal mappings. Other topics as time permits.

Mr. van Moerbeke

Mathematics 121a and b. Topology I

Point set topology, fundamental group, covering spaces. Simplicial complexes, elementary homology and cohomology theory with applications. Manifolds and orientation, cup and cap products, Poincare duality. Other topics as time permits.

Fall Term: Mr. Igusa
Spring Term: Mr. Duflo

Mathematics 150a and b. Mathematical Aspects of Information Science

For students with a strong mathematical background, interested in the theoretical underpinnings of computer science and the more mathematical aspects of real world computing. Topics will include: Turing machines and other models of computation, recursive function theory, analysis of algorithms and complexity theory, data types and data structures, programming languages and their translators, hardware and machine architecture.

Mr. Palais

69	Mathematics		
Mathematics 200aR. Second Year Seminar	Mr. Buchsbaum	Mathematics 297. Number Theory Seminar	Research seminar; not normally taken for credit. Staff
Mathematics 201a and b. Algebra II	Commutative algebra. Mr. Seshadri	Mathematics 299a and b. Readings in Mathematics	Staff
Mathematics 202a and b. Algebraic Geometry I	Mr. Mayer	Mathematics 302a. Algebraic Geometry	Mr. Buchsbaum
Mathematics 203a. Algebraic Number Theory I	Mr. Monsky	Mathematics 302b. Arithmetic Algebraic Geometry	□ Not offered 1983-1984
Mathematics 203b. Topics in Algebraic Number Theory	Mr. Monsky	Mathematics 311a. Analysis III	Topics in partial differential equations. Staff
Mathematics 211a and b. Analysis II	Topics in mechanics and dynamical systems. Discussed will be both examples and theory in dynamical systems and in particular, in Hamilton mechanics. The course will develop all the tools necessary and will be elementary. At the same time we will discuss some recent developments. Mr. Adler	Mathematics 321a. Topology III	Mr. J. Levine
Mathematics 221a. Topology II	Elementary homotopy theory, fibrations, obstruction theory, and spectral sequences. Mr. Brown	Mathematics 321b. Topology III	Mr. Stark
Mathematics 221b. Topology II	Cohomology operations, characteristic classes, classifying spaces, elementary cobordism. Mr. Brown	Mathematics 324b. Lie Groups	Mr. Schwartz
Mathematics 291. Fellowship of the Ring — Seminar in Commutative Algebra	Research seminar; not normally taken for credit. Staff	Mathematics 326a and b. Topics in Algebraic Geometry and Commutative Algebra	Mr. Eisenbud
Mathematics 293. Topology Seminar	Research seminar; not normally taken for credit. Staff	Mathematics 335a. Non-Commutative Algebra	□ Not offered 1983-1984
Mathematics 295. Algebraic Geometry Seminar	Research seminar; not normally taken for credit. Staff	Mathematics 335b. Non-Commutative Algebra	□ Not offered 1983-1984
Mathematics 296. Seminar in Artin Rings and Representation Theory	Research seminar; not normally taken for credit. Staff	Mathematics 399a and b. Readings in Mathematics	Staff
		Mathematics 401-413. Research	Independent research for the Ph.D. degree. +01. Mr. Auslander +08. Mr. Palais +02. Mr. Brown +09. Mr. Schwarz +03. Mr. Buchsbaum +10. Mr. Eisenbud +04. Mr. J. Levine +11. Mr. Mayer +05. Mr. J. Levine +12. Mr. Van +06. Mr. Matsusaka Moerbeke +07. Mr. Monsky +13. Mr. Igusa

Music

Objectives

The graduate program in music, leading to the degrees of Master of Fine Arts and Doctor of Philosophy, is designed to provide a command of the craft of composition and an understanding of the nature, structural basis, and historical development of music.

The following general fields of study are offered in music:

1. *Composition.* This program, emphasizing composition and supported by studies in analysis, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.

2. *Music History.* This program, featuring studies in a variety of techniques including analysis applied to different repertoires and historical problems, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.

3. Applicants in music theory are welcomed, although no program specifically confined to theory is offered. The course of study is individually determined, in consultation with the faculty, to comprise courses in theory, analysis, history of theory, and music history, offered under the above two headings.

Students must specialize in one of these areas, but composers are expected to undertake some work in music history and historians to acquire some competence in tonal writing.

Admission

Only a limited number of students will be accepted. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Applicants for study in musical composition and theory are required to submit, in addition to a transcript of their undergraduate records, evidence of qualification in the form of examples of original work in musical composition and advanced work in musical theory. Applicants for admission in the history of music should submit examples of their prose writing on music as evidence of their ability to handle the language and specialized vocabulary. Undergraduate theses or term papers will be satisfactory. History applicants wishing to specialize in analysis should also submit examples of advanced work in musical theory. This work should be submitted together with the formal application for admission.

All applicants are expected to have some proficiency at the piano or an orchestral instrument. Information about this should be furnished when making formal application. A departmental written test in basic musicianship and analysis will be sent to all applicants; answers are to be submitted by mail on or before February 15.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the department on or before the final date specified in the Academic Calendar for filing "Application for Financial Aid." Readmission will be refused in cases where students have not demonstrated a capacity for acceptable graduate work.

Faculty

Associate Professor
Allan R. Keiler,
Chair and Director of
Graduate Studies

Professor
Caldwell Titcomb,
Co-Chair and Director
of Undergraduate
Studies

Professor
Martin Boykan

Professor
Robert L. Marshall

Professor
Harold S. Shapero,
Director of Electronic
Studios

Associate Professor
James D. Olesen,
Acting Director of
Performance
Activities

Assistant Professor
Eric Chafe

Assistant Professor
Peter B. Child

Assistant Professor
Edward C. Nowacki,
Theory Coordinator

Assistant Professor
Conrad M. Pope

Lecturer with Rank of
Assistant Professor
David Hoose

Instructor
Allen L. Anderson

Instructor
Ross Bauer

Performing Artist in
Residence
Sarah Mead

Performing Artists in
Residence
**Lydian String
Quartet:**
Judith Eissenberg,
Mary Ruth Ray,
Rhonda Rider,
Wilma Smith.

Degree Requirements

Master of Fine Arts

Language Requirements.

Group A: French, German, Italian.

Group B: Spanish, Latin, Hebrew, Greek (and other languages at the discretion of the music faculty).

Candidates for the master's degree in Musical Composition and Theory must possess a reading knowledge of one language from Group A.

Candidates for the master's degree in History of Music must possess a reading knowledge of two languages from Group A.

Foreign language course credits will not in themselves constitute fulfillment of the language requirements for advanced degrees. All candidates must pass language examinations set or approved by the music faculty and offered periodically during the academic year. Students are urged to take these examinations at the earliest feasible date. In case of failure, an examination may be taken more than once.

Instrumental Proficiency.

At least moderate proficiency at the piano is required of all candidates for advanced degrees.

Residence Requirements.

Six full courses or the equivalent in half-courses at the graduate level, completed with distinction, and a thesis are required of all candidates.

The department normally allows credit for no more than one full course taken at another institution.

In general, the program of course work is completed in two academic years. It is suggested that students pursue no more than three full courses in any one year.

Examinations.

Shortly after their arrival, new graduate students will be expected to take an examination in the standard literature of music. Where deficiency occurs, examinations will be repeated.

Before the end of their second year of study, candidates for the degree of Master of Fine Arts must demonstrate their competence in both theory and history by means of a written general examination in their major field, and either by an examination or by one of the following alternatives in their minor field:

For candidates in composition

the successful completion of Music 182a (or b) or 184a (or b), or the equivalent (requiring prior approval by the graduate adviser) or of comparable courses taken elsewhere, will be accepted in lieu of a minor general examination in music history. The faculty reserves the right to evaluate the student's accomplishment in history courses not taken at Brandeis.

For candidates in music history

competence in theory can be demonstrated by the successful completion of at least one semester of Music 227, or by a written examination.

The following timetable is suggested for major general examinations: *For candidates in composition*, the composition examination may be taken during the first year and repeated if necessary in the second; the analysis portion of the examination will normally be taken during the second year. Examinations may be repeated in the third year only in the case of a student not proceeding beyond the master's degree. *For candidates in music history*, major general examinations will normally be taken during the second year; they may be repeated in the third year at the discretion of the faculty.

Thesis.

Candidates for the degree of Master of Fine Arts in Music are required to submit a thesis. For candidates in musical composition and theory, this will consist of a musical composition, its scope to be approved by the music faculty. For candidates in the history of music it will be an analytical or historical study on a topic acceptable to the music faculty. Candidates in the history of music may submit, in lieu of a separate thesis, revised copies of two seminar papers that have been certified by the seminar instructor and at least one other faculty member as demonstrating a high degree of competence in research and writing. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than December 1 for a February degree or March 1 for a May degree.

Doctor of Philosophy	Admission to the doctoral program is normally granted at the end of the second year of residence and is determined by the student's performance in course work and general examinations. For candidates in music history, acceptance may be deferred pending repetition of portions of the major examinations.		candidates in composition and theory, a semester of Music 200 or 299 is suggested; for candidates in history, an additional semester of Music 227.
Residence Requirements.	A minimum of eight full courses or the equivalent in half-courses at the graduate level, completed with distinction, are required of all candidates. In general, the program of course work will be completed in three academic years. Applicants who have done graduate work elsewhere may apply for transfer of credit for such work; a maximum of one year of residence may be granted.	Admission to Candidacy. Dissertation.	After meeting their language, residence, and general examination requirements, candidates for the Ph.D. must pass a special oral qualifying examination. Students will be admitted to candidacy for the Ph.D. degree upon successful completion of the written and oral qualifying examinations, fulfillment of the language requirements, and the approval of a dissertation topic. Candidates for the degree of Doctor of Philosophy in Composition must submit an original musical composition and a thesis on a theoretical or analytical subject. Candidates for the degree of Doctor of Philosophy in History of Music must submit a dissertation on a historical or analytical subject. Two copies of the doctoral dissertation, as well as an abstract of the dissertation not to exceed six hundred words in length, should be submitted to the department or committee chairman no later than December 1 for a February degree and March 1 for a May degree of the academic year in which the Ph.D. degree is to be conferred.
Instrumental Proficiency.	At least moderate proficiency at the piano is required of all candidates.		
Language Requirements.	Candidates for the doctoral degree in the history of music must possess a reading knowledge of all three languages in Group A. If appropriate to the student's program, the music faculty may accept a language in Group B in lieu of Italian. Candidates in composition and theory must possess a reading knowledge of two languages in Group A.		Written dissertations should demonstrate the competence of the candidate as an independent investigation, his or her critical ability, and effectiveness of expression. Upon completion of the dissertation, the candidate will be expected to defend it in an oral examination.
Examinations.	Candidates for the Ph.D. degree have no additional written examination requirements in their major field beyond those for the M.F.A. In the minor field, doctoral-level examinations may, if desired, be replaced by the option of an additional semester of course work completed with distinction. For		

Courses of Instruction

Except in the rarest circumstances, graduate credit is not allowed for courses numbered below Music 165.

Music 168a. ☐ Not offered 1983-1984
Orchestration

Music 171a. **History of Music and Drama Criticism**
This seminar will deal with the various approaches, theoretical and practical, to the challenge task of writing about two of the most important of the performing arts. The journalism of representative critics, past and present, will be discussed; the students will gain practical experience through the regular writing of play or concert reviews at the newspaper and superior-magazine level.

Mr. Titcomb

Music 180bR. ☐ Not offered 1983-1984
Ethnomusicology

Music 182a. ☐ Not offered 1983-1984
Medieval and Renaissance Periods

Music 184a. ☐ Not offered 1983-1984
Topics After 1750

Music 194b. **Problems in Cultural Historiography**
Readings and discussion concerning the conceptual foundation of historical study in the arts; the relation between history and criticism; the history and function of style-period concepts; evolutionary and developmental theories; modes of explanation in cultural history.

Mr. Keiler

Music 195a. **Electronic Music**
Composition and recording of electronic music. Technical electronics as they apply to musical problems.

Mr. Shapero

Music 197a. ☐ Not offered 1983-1984
Tutorial in the Analysis of Tonal Music

Music 197bR. **Tutorial in the Analysis of Twentieth Century Music**
Basic analytical problems of the music of the twentieth century approached through detailed study of a few representative works.

Mr. Pope

Music Colloquium	Discussions of special topics led by the faculty and occasional guests. Some of the sessions will include performances of new works. Required of all graduate students. <i>Non-credit.</i>	Music 227b. Proseminar in Theory and Composition	Section 1: Mr. Pope Section 2: Mr. Shapero
	Staff and Visiting Lecturers		
Music 200aR. Proseminar in Musicology	A survey of the principal subject matters, problems, and techniques comprising the discipline of musicology.	Music 228a. Seminar in Twentieth Century Techniques	□ Not offered 1983-1984
	Mr. Nowacki		
Music 200bR. Proseminar in Musicology	See Music 200a.	Music 233a. Topics in Analysis	Mr. Anderson
	Mr. Chafe	Music 233b. Topics in Analysis	Mr. Pope
Music 203. Advanced Musical Analysis	□ Not offered 1983-1984	Music 244b. Berlioz	□ Not offered 1983-1984
Music 204b. Proseminar in Style and Analysis	□ Not offered 1983-1984	Music 246a. Stravinsky	□ Not offered 1983-1984
Music 221b. Seminar in the Music of the Middle Ages	□ Not offered 1983-1984	Music 270a. Seminar in Serial Music	□ Not offered 1983-1984
Music 222b. Seminar in the Music of the Renaissance	□ Not offered 1983-1984	Music 292a. Seminar in Composition	Group meetings and individual conferences. Opportunities for the performance of student works will be provided. Section 1: Mr. Boykan Section 2: Mr. Pope
Music 223a. Seminar in Baroque Music	□ Not offered 1983-1984	Music 292b. Seminar in Composition	Section 1: Mr. Boykan Section 2: Mr. Pope
Music 224. Seminar in Pre-Classical and Classical Music	Study of historical problems in the music of the middle and late eighteenth century. Mr. Marshall	Music 299a and b. Individual Research and Advanced Work	Staff
Music 225. Seminar in Romantic Music	□ Not offered 1983-1984	Music 401-410. Dissertation Research	Required of all doctoral candidates +01. Mr. Boykan +02. Mr. Marshall +03. Mr. Shapero +05. Mr. Titcomb +07. Mr. Keiler +08. Mr. Chafe +09. Mr. Pope +10. Mr. Nowacki
Music 226a. History and Literature of Western Music Theory: Baroque to 1850	Mr. Keiler	Electronic Music Studios	Two studios with facilities for the composition of electronic music are available to qualified student composers. Director: Mr. Shapero
Music 226b. History and Literature of Western Music Theory: 1850 to the Present	□ Not offered 1983-1984		
Music 227a. Proseminar in Theory and Composition	Technical projects in theory and composition: tonal forms and contrapuntal techniques. Mr. Shapero		

The Philip W. Lown School of Near Eastern and Judaic Studies

The Lown School is the center for all programs of teaching and research in the areas of Judaic Studies, Ancient Near Eastern Studies and Islamic and Modern Middle Eastern Studies. The School includes the Department of Near Eastern and Judaic Studies, the Hornstein Program for Jewish Communal Service and the Center for Modern Jewish Studies. The Department of Near Eastern and Judaic Studies offers academic programs in the major areas of its concern. The Horn-

stein Program is a professional training program leading to the Master of Arts degree in Jewish Communal Service. It makes full use of academic resources of the Department of Near Eastern and Judaic Studies and other departments in the university.

The Center for Modern Jewish Studies conducts, and serves to stimulate, research and teaching in Contemporary Jewish Studies, primarily in the field of American Jewish Studies.

Near Eastern and Judaic Studies

Objectives

The graduate program in Near Eastern and Judaic Studies, leading to the Master of Arts and Doctor of Philosophy degrees, is designed to train scholars and teachers in the various cultures of the Near East and of classical and modern Judaic civilization, and to advance scholarly research in these areas. This work is done mainly through study of the relevant languages and literatures and the interpretation of historical sources.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this department.

Faculty

Associate Professor
Leon A. Jick,
Chair:
Contemporary Jewish history.

Professor
Marvin Fox,
Director of the Lown School:
Jewish philosophy. Rabbinic thought. Modern Jewish thought.

Professor
Naftali C. Brandwein:
Modern Hebrew literature.

Professor
Alfred L. Ivry:
Jewish philosophy. Islamic philosophy.

Professor
Jehuda Reinharz:
Modern Jewish history. History of Zionism.

Professor
Nahum M. Sarna:
Biblical studies. Dead Sea Scrolls. Ugaritic. Northwest Semitic inscriptions.

Professor
Marshall Sklare,
Director of the Center for Modern Jewish Studies:
Sociology of the Jewish community.

Professor
Dwight W. Young:
Ancient Near East civilization. Assyriology. Ugaritic. Biblical studies.

Visiting Associate Professor
Tzvi Abusch:
Assyriology. Religions and cultures of the Ancient Near East.

Associate Professor
Michael Fishbane:
Biblical studies. Dead Sea Scrolls.

Adjunct Associate Professor
Ariella D. Goldberg,
Director of Hebrew Language Program:
Hebrew.

Associate Professor
Avigdor Levy,
Director of Islamic and Middle Eastern Studies:
Middle Eastern studies.

Associate Professor
Benjamin C. I. Ravid,
Director of Graduate Studies:
Jewish history.

Associate Professor
Bernard Reisman:
Jewish communal service.

Assistant Professor
Aaron Katchen:
Second Commonwealth and Hellenistic Judaism. Early modern Jewish history.

Assistant Professor
Reuven Kimelman:
Talmud and Rabbinic literature.

Assistant Professor
Jay Brodbar-Nemser:
Modern Jewish studies

Lecturer
Charles Cutter:
Judaic bibliography.

Lecturer
Miroslav Krek:
Islamic bibliography.

Adjunct
Lecturer Michael D. Swirsky:
Hebrew.

Program of Study

Among the main fields in the area of Near Eastern and Judaic Studies in which courses are being given in the Graduate School are: Ancient Near East Studies. Biblical Studies. Jewish History. Hebrew Literature. Jewish Thought.

Jewish Philosophy, Medieval and Modern. Islamic Philosophy. Ottoman History. The Modern Middle East. Contemporary Jewish Studies. The department regularly offers additional courses in related fields.

Degree Requirements

Master of Arts

Residence Requirements.	Two years of full-time residence will be required at the normal course rate of seven courses each academic year.
Language Requirements.	Candidates will be required to establish competence in Hebrew or Arabic as well as in one European language, normally either French or German.
Comprehensive Examination.	All candidates for the Master of Arts degree are required to pass a comprehensive examination.
Thesis.	In the field of the Modern Middle East, students may be required to write a thesis which must be submitted no later than April 1 of the year in which the degree is to be conferred. A thesis is not required in other fields in the Department of Near Eastern and Judaic Studies.

Language Requirements.

Candidates will be required to establish competence in Hebrew or Arabic as well as in two European languages, normally French and German. Additional languages may be required as necessary for research in each individual candidate's field.

Comprehensive Examinations.

All candidates for the Ph.D. degree are required to pass three comprehensive examinations. The first examination in each field will be a written comprehensive qualifying examination covering the field as a whole. The second and third examinations will usually be oral and will cover more specialized subjects within the candidate's field.

Admission to Candidacy.

A student registered for studies leading to the Ph.D. degree becomes a candidate for that degree upon fulfillment of the residence requirements, when he/she has passed the comprehensive examinations, fulfilled the language requirements, and has had a dissertation proposal approved by the department.

Dissertation and Defense.

The dissertation must demonstrate the candidate's thorough knowledge of the field and competence in independent research, and must constitute an original contribution to knowledge. Two copies of the dissertation, one of which must be the original typescript, are to be deposited in the office of the department chairman no later than April 1 of the year in which the candidate expects to earn the degree. The student must successfully defend the dissertation at a final oral examination.

Doctor of Philosophy

Residence Requirements.	Three years of full-time residence will be required at the normal rate of seven semester-courses each academic year. Students who enter with graduate credit from other recognized institutions may apply for transfer credit. By rule of the Graduate School, a maximum of one year of credit may be accepted toward the residence requirement on the recommendation of the chairman of the department.
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Courses of Instruction

NEJS 101. Introductory Literary Arabic	A first course in literary Arabic covering the essentials of grammar, reading, pronunciation, translation and composition.
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To be announced

NEJS 104a. Islam: Civilization and Institutions

Consideration of major issues in Islamic history. Examinations of the principle of Islamic theology and law; philosophy and political theory; social and political institutions. Appreciation of Islamic civilization and culture; relations with other cultures. Islam in modern times.

Messrs. Levy and Krek

NEJS 102a. Intermediate Literary Arabic	Study of advanced grammatical and syntactical forms. Reading in classical and modern texts. Drills in pronunciation and composition. <i>Prerequisite:</i> NEJS 101 or its equivalent.
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Mr. Levy

NEJS 104bR. Aramaic Dialectology

□ Not offered 1983-1984

NEJS 102b. Intermediate Literary Arabic	A continuation of NEJS 102a.
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Mr. Krek

NEJS 106. Elementary Ugaritic

□ Not offered 1983-1984

NEJS 103a. Advanced Literary Arabic	This course is designed to help the student attain an advanced reading proficiency. The syllabus includes selections from classical and modern texts representing a variety of styles and genres.
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Mr. Krek

NEJS 107b. Temple, Myth and Ritual in Ancient Mesopotamia

□ Not offered 1983-1984

NEJS 103b Advanced Literary Arabic	A continuation of NEJS 103a.
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Mr. Levy

NEJS 108b. Comparative Grammar of Semitic Languages

□ Not offered 1983-1984

NEJS 109aR. Genesis in Light of Archaeology	The book of Genesis will be considered as a whole and selections will be analyzed in depth against the historical background that gave rise to the traditions. The creation of man, calculation of life spans, the deluge and Noah's ark, the patriarchal homeland, the promised land and its holy sites, the Egyptian link and the Damascus connection will be discussed. Mr. Young	NEJS 117b. Dead Sea Scrolls	□ Not offered 1983-1984
NEJS 111a. Introduction to Biblical Literature	□ Not offered 1983-1984	NEJS 118aR. Biblical Law	The Law of Collections of the Pentateuch: A study of the legal corpora of Exodus and Deuteronomy in Hebrew in terms of Israelite society and religion and in comparison and contrast with the ancient Near Eastern Law Collections. Mr. Sarna
NEJS 111b. Genesis	□ Not offered 1983-1984	NEJS 118bR. Book of Psalms	Selected readings. An examination of Hebrew and Near Eastern psalmody. A study of the leading religious concepts in the light of modern exegesis. This course will be given in Hebrew. Mr. Sarna
NEJS 112a. Biblical Hebrew	□ Not offered 1983-1984	NEJS 119aR. The Book of Ezekiel	□ Not offered 1983-1984
NEJS 112b. The Book of Isaiah	□ Not offered 1983-1984	NEJS 119b. The Minor Prophets: Nahum, Habakkuk, Zephaniah	□ Not offered 1983-1984
NEJS 113a. Targum	□ Not offered 1983-1984	NEJS 120b. Intermediate Talmud	A more intensive study of selected portions of Treatise Sanhedrin not dealt with in NEJS 53a. Greater emphasis will be placed on the understanding of the classical commentaries. Students will be expected to develop the ability to work through a section of the text on their own. The analysis will deal with the issue of voluntary and compulsory arbitration, and the binding nature of gambling agreements. <i>Prerequisite:</i> Hebrew 13. Mr. Kimelman
NEJS 113b. The Book of Exodus	□ Not offered 1983-1984	NEJS 121b. Aspects of the Apocalyptic Imagination	A comparative and analytic survey of the idea of Apocalypse through study of the literary images and expressions of world catastrophe and renewal in religious literature from ancient Egyptian, Mesopotamian and Israelite antiquity through the classical and medieval expression of Judaism, Christianity and Zoroastrianism. Among the topics to be considered will be: mythic themes; temporal schemes; freedom and fatality; prophecy and messianism; relations between world origins and world destructions - renewals, and varieties of cognitive or spiritual goals and crises involved. Aspects of the secularization of Apocalyptic and consciousness literature in modernity will also be treated. Mr. Fishbane
NEJS 114a. The Book of Amos	An intensive study of the text in English translation, the historical background, the leading ideas, his contribution to biblical religion. Mr. Sarna	NEJS 123b. Classical Biblical Commentaries	□ Not offered 1983-1984
NEJS 114b. The Art of the Biblical Narrative	□ Not offered 1983-1984	NEJS 124aR. Modern Jewish-Christian Religious Thought	□ Not offered 1983-1984
NEJS 115a. Book of Deuteronomy	A close examination of the text of Deuteronomy with special attention to its religious, legal and compositional features. Traditions found in the Book of Deuteronomy will be compared with their counterparts elsewhere in the Pentateuch. The place of the Book of Deuteronomy in the history of the religion of Israel will be considered. Mr. Fishbane		
NEJS 116b. The Problem of Evil in Jewish Philosophy	Beginning with an analysis of the general philosophical/theological problem posed by the problem of evil, the course will continue with a systematic account of the main treatments of the problem in Jewish thought from antiquity to the present. Mr. Fox		
NEJS 117a. Job and the Problem of Evil	□ Not offered 1983-1984		

NEJS 124b. Introduction to Jewish Mysticism	A survey of the field of Jewish mysticism as reflected in its history, its major texts, its original ideas and its symbolic structures. In addition to the standard secondary works, readings will include selections from the primary sources such as the Zohar. While focusing on the history and development of the central themes in Jewish mysticism, the course will also be concerned with how to read a Jewish mystical text. All readings will be in English. Mr. Fox	NEJS 131a. History of Jewish Philosophy: From the Bible to Maimonides	A survey and analysis of dominant themes in Jewish philosophy as reflected in the Bible, Rabbinic literature and such major thinkers as Philo, Saadys, Solomon ibn Gabirol, Bahya, Judah Halevi and Maimonides. Mr. Fox
NEJS 125a. Midrashic Literature: Mekhilta d'Rabbi Yishmael	□ Not offered 1983-1984	NEJS 132b. Philosophy of the Kalam	□ Not offered 1983-1984
NEJS 125b. Midrashic Literature: Sifre Deuteronomy	□ Not offered 1983-1984	NEJS 135a. Neoplatonic Elements in Islamic and Jewish Philosophy	This course will probe that major strain of classical and medieval philosophy which bridged mystical and rational traditions and which was regarded by many as compatible with religious systems of belief. The metaphysical core of Neoplatonism will first be disclosed and then examples of its adaption by Islamic and medieval Jewish philosophers will be studied. Among the books to be studied are English translations of portions of the writing of Plotinus, Proclus, Al-Kindi, Isaac Israeli, Shelomo ibn Gabirol and Judah Halevi. Mr. Ivry
NEJS 126b. Agadic Literature: Avot DeRabbi Natan	□ Not offered 1983-1984	NEJS 135bR. Aristotelian Elements in Islamic and Jewish Philosophy	□ Not offered 1983-1984
NEJS 127a. Hellenistic Jewish Literature	□ Not offered 1983-1984	NEJS 137aR. Three Major Themes in Modern Hebrew Literature	Following a brief survey of the literature from the Hebrew Enlightenment to the Hebrew Renaissance, we will make an in-depth textual study of selected prose and poetry from the Hebrew Renaissance to today with special emphasis on the following selected themes: Biblical images and motifs, the Holocaust, and national redemption. Principal writers are Bialik, Shlonsky, Gilboa, Greenberg, Goldberg and Hazaz. Mr. Brandwein
NEJS 127b. The Jewish Liturgy	A study of the literary structure, theological framework and historical development of the Sabbath and daily liturgy. Emphasis will be placed on the interplay of the literary forms and theological ideas in each prayer, and within the flow of the complete service. Concomitantly, works on the problematics of prayer will be studied. Scholars such as Eliezer Berkovitz, Daniel Goldschmidt, Joseph Heinemann, Abraham Heschel, Issachar Jacobson and Trygve Kronholm will be studied. Mr. Kemelman	NEJS 138aR. Modern Hebrew Literature	□ Not offered 1983-1984
NEJS 128a. Jews and Greeks	□ Not offered 1983-1984	NEJS 138b. Modern Hebrew Literature	□ Not offered 1983-1984
NEJS 128b. Jews and Romans	□ Not offered 1983-1984	NEJS 139a. Major Trends in Modern Hebrew Literature	□ Not offered 1983-1984
NEJS 129a. Philo Judaeus of Alexandria	□ Not offered 1983-1984	NEJS 139b. Modern Hebrew Literature	□ Not offered 1983-1984
NEJS 129b. Alexandria: The City and the Idea	□ Not offered 1983-1984		
NEJS 130a. Images of Moses Ancient and Modern	□ Not offered 1983-1984		

NEJS 140a. The Jews in Europe to 1492	An examination of the phenomenon of Jewish survival in the European diaspora; the Jews in the Roman Empire; the origins of anti-semitism; the Jewish religious heritage; the medieval Jewish community; the medieval church, society, economy and the Jews; the expulsion of the Jews from Western Europe.	NEJS 147b. The Arab-Israeli Conflict	□ Not offered 1983-1984
	Mr. Ravid	NEJS 149b. Islamic Bibliography	The purpose of this course is to familiarize the student with the history of oral and written communications in Islam and Middle East. Origins and development of printing is discussed. Special emphasis is placed on bibliographic literature in Western languages of Arabic, Turkish and Persian manuscripts and printed works. There are no prerequisites, although a workable knowledge of European languages and languages of the area is desirable.
NEJS 140b. From Medieval to Modern: The Jews in Europe from 1492 to 1815	The Jews in the Renaissance; the Marranos; the Reformation, counter-Reformation and the Jews; Eastern Europe, mysticism, messianism and hassidism; <i>raison d'état</i> and the readmission of Jews to Western Europe, court Jews, Prussia and the Berlin enlightenment; emancipation; some modern philosophies of Jewish history.		Mr. Krek
	Mr. Ravid	NEJS 150a. Foundations of Zionist Thought	□ Not offered 1983-1984
NEJS 141a. Jewish Historiography	□ Not offered 1983-1984	NEJS 150bR. The Great Powers and the Middle East Since 1798	See History 183bR. Mr. Wasserstein
NEJS 141b. Jews, Catholics and Protestants in Western Europe, from the Reformation to the Present	A study of the political, legal, social and economic status of Catholics, Protestants and Jews in early and modern Europe, with emphasis on the status of minorities and their struggle for equality in the transition from the medieval republica Christiana to the modern secular nation-state.	NEJS 151a. Introduction to Islamic Philosophy	□ Not offered 1983-1984
	Mr. Ravid	NEJS 152b. A History of Anti-Semitism	□ Not offered 1983-1984
NEJS 142b. Economic History of the Jews to the Emancipation	□ Not offered 1983-1984	NEJS 153b. Sephardic Jewry, the Marranos, and the Inquisition	□ Not offered 1983-1984
NEJS 143b. Faith and Reason in Islam	□ Not offered 1983-1984	NEJS 154a. History of the Hebrew Language	□ Not offered 1983-1984
NEJS 144a. Jewish Communities in the Muslim Near East in the 19th and 20th Centuries	□ Not offered 1983-1984	NEJS 156b. Man and the Gods: Mythology and Magic of the Ancient Near East	An introduction to the myth and magic of the Ancient Near East. Special attention will be paid to how the myths express an understanding of the Gods and the world, and how magic deals with anxieties of human existence. Mr. Abusch
NEJS 144b. Nationalism in the Middle East	□ Not offered 1983-1984	NEJS 157a. Israeli Society	□ Not offered 1983-1984
NEJS 145b. The Middle East in the Twentieth Century	□ Not offered 1983-1984	NEJS 158bR. Biblical Prophecy: Book of Jeremiah	□ Not offered 1983-1984
NEJS 147a. History of the Middle East and the Ottoman Empire, 1450-1914	□ Not offered 1983-1984	NEJS 160a. The Emergence of the American Jewish Pattern, 1654-1967	Survey of American Jewish history from the earliest settlement to the present. The emergence of the institutions, ideologies, life styles and cultural norms which constitute the American Jewish pattern. Mr. Jick

NEJS 161a. American Jewish Life	A survey of American contemporary Jewish life with special emphasis on the diverse forms of Jewish identification found in American Jewry. Topics include Reform, Conservative and Orthodox Judaism; Jewish family life including intermarriage; and the relationship of Jews to the general society and to other ethnic groups. Mr. Sklare	NEJS 169aR. The Destruction of European Jewry	The function of anti-Semitism in the comparative history and politics of Nazism; the Holocaust organization and the victims' responses; allied policies and Western reactions; post-war punishment and reparations. Interdisciplinary approaches to historical sociology and legal philosophy will be applied. Mr. Jick
NEJS 162a. Jewish Identity in the Modern World	□ Not offered 1983-1984	NEJS 171b. Trends and Values in Yiddish Literature	□ Not offered 1983-1984
NEJS 163a. The Sociology of the American Jew	□ Not offered 1983-1984	NEJS 173b. Seminar in Yiddish Literature	□ Not offered 1983-1984
NEJS 164b. The Sociology of the American Jewish Community	□ Not offered 1983-1984	NEJS 174b. <i>Pirkei Arot — The Sayings of the Fathers: In Its Historical Setting</i>	□ Not offered 1983-1984
NEJS 165. From the Rhine to the Pale: The Jews of Central and Eastern Europe, 1740-1939	See History 135b. Mr. Kieval	NEJS 175a. History of Zionism	□ Not offered 1983-1984
NEJS 166a. Modern Jewish History to 1880	Major themes will include: Enlightenment and Haskalah in eastern and western Europe, Hasidism, Emancipation and the argument for and against Emancipation, Assimilation and the problem of the marginal Jew, the Science of Judaism, the development of denominationalism in Judaism. Mr. Reinhartz	NEJS 176a. Judaism and Christianity in the First Centuries	□ Not offered 1983-1984
NEJS 166b. Modern Jewish History 1880-1948	Major themes will include: integration and assimilation, migration, nationalism, Zionism, non-Zionism, Diaspora nationalism, western and eastern Jewry in the period between the World Wars, the Holocaust and the establishment of the State of Israel. Mr. Reinhartz	NEJS 177a. Agnon and His Contemporaries: Hebrew Literature in Translation	The course will examine the existence and struggle of the Jews in the Diaspora and Israel from World War I to the present, as reflected in modern Hebrew literature, particularly in the works of Agnon and his contemporaries. Special emphasis will also be given to parallel motifs in modern European literature. Mr. Brandwein
NEJS 168a. Topics in East European Jewish History	An examination of the various facets of East European Jewish culture, values and way of life, as manifested in Jewish literature and folklore and in the social, political and religious movements and institutions of the period. Primary attention will be given to Jewish life in the Russian empire. Mr. Abramsky	NEJS 182a. Introduction to Jewish Bibliography	The aim of the course is to acquaint students in the various fields of Judaic studies with the general bibliographic tools and the bibliographies in the major sub-fields. This course will concentrate on general Judaica/Hebraica bibliographies and on subject bibliographies in such fields as Jewish history, Jewish philosophy, Hebrew language and literature, anti-Semitism, Holocaust studies, etc. Mr. Cutter
		NEJS 182b. Introduction to Jewish Bibliography	See NEJS 182a. Mr. Cutter
		NEJS 187bR. Biblical Images, Motifs and Ideas in Modern Jewish Poetry	A study of the major biblical themes, images and ideas in modern Hebrew poetry, concentrating on works from Bialik to A. Gilboa and H. Guri. Examples of such works are: the prophet Moses in Bialik, King Saul in Tchernichovsky, Father Isaac in Gilboa and Guri. Mr. Brandwein

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NEJS 201a. The Syntax of Pre-Hellenistic Literary Hebrew	□ Not offered 1983-1984	NEJS 223b. Readings in the Dead Sea Scrolls	□ Not offered 1983-1984	
NEJS 202. Ancient Syria	A synthesis of art, architecture, artifacts, history and written documents. Topic for 1983-84: The Civilization of Ugarit. Mr. Young	NEJS 224bR. The History of the Biblical Canon, Text and Ancient Versions	□ Not offered 1983-1984	
NEJS 206. Seminar in Advanced Akkadian Literary Texts: Myths, Epics, Hymns	This course is for beginning students of Akkadian. No prerequisites. Mr. Abusch	NEJS 225aR. Seminar in Phoenician and Aramaic Inscriptions	□ Not offered 1983-1984	
NEJS 207a. Akkadian Religious Texts	□ Not offered 1983-1984	NEJS 225b. North-West Semitic Inscriptions	Mr. Sarna	
NEJS 207b. Akkadian Magical and Medical Texts	□ Not offered 1983-1984	NEJS 226aR. Topics in Biblical Religion	□ Not offered 1983-1984	
NEJS 208aR. Mantic, Magical and Oracular Traditions in Ancient Israel: Traits and Survivals	□ Not offered 1983-1984	NEJS 227a. Seminar in Book of Chronicles	□ Not offered 1983-1984	
NEJS 210a. Seminar on the Institutional Development of the American Jewish Community	□ Not offered 1983-1984	NEJS 228b. Seminar on the Greek Versions of the Bible	□ Not offered 1983-1984	
NEJS 210b. Seminar on Strategies of Jewish Continuity in America: Options and Alternatives	□ Not offered 1983-1984	NEJS 229. Introduction to Classical Ethiopic	□ Not offered 1983-1984	
NEJS 211b. Topics in American Jewish History	□ Not offered 1983-1984	NEJS 230a. Seminar in Medieval Jewish Philosophy	Mr. Ivry	
NEJS 215b. Topics in American Jewish Communal Organization	An examination of the structure of the American Jewish community with particular emphasis on gaining an understanding of the intricacies of the variegated network of local and national Jewish organizations. Emphasis is placed on the assumptions made by different agencies and institutions in pursuing their objectives. The relationship between the formal and the informal Jewish community is explored. The historical roots of American Jewish institutions are examined. Mr. Sklare	NEJS 230b. Seminar in Medieval Jewish Philosophy	Mr. Ivry	
NEJS 219b. Sumerian Historical Inscriptions	□ Not offered 1983-1984	NEJS 231b. Seminar in Medieval Islamic Philosophy	□ Not offered 1983-1984	
		NEJS 232a. Seminar in Modern Jewish Philosophy	□ Not offered 1983-1984	
		NEJS 233a. Seminar in Islamic Philosophy	□ Not offered 1983-1984	
		NEJS 233bR. Quest and Existence in the Works of Brenner, Gnessin, Agnon	Analysis of structure themes in the works of Brenner, Gnessin and Agnon. The quest theme and double vision in the works of Agnon; the tragic vision and the spiritual-national quest in the works of Brenner; Eros and Theos in the works of Gnessin; the self-portrait and stream of consciousness in the works of Brenner, Agnon and Gnessin. Mr. Brandwein	

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NEJS 234a. Seminar in Late Medieval Jewish Philosophy	□ Not offered 1983-1984	NEJS 259a The Jewish Response to German Culture from the Enlightenment to World War II	This course will explore the Jewish response to German culture from Moses Mendelssohn to World War II. The major themes in this course will center on individual Jews as well as Jewish institutions. Among the individuals to be considered are: Moses Mendelssohn, Heinrich Heine and Franz Kafka. Institutional responses will include: the Centralverein deutscher Staatsbürger juedischen Glaubens, the Zionistische Vereinigung fuer Deutschland, the Frauenbund, the Reform Movement and others. Mr. Reinharz
NEJS 234b. Seminar in Modern Jewish Philosophy	□ Not offered 1983-1984		
NEJS 236a. Theories of Prophecy in Medieval Jewish Philosophy	□ Not offered 1983-1984		
NEJS 236b. "Articles of Faith" in Medieval Jewish Philosophy	□ Not offered 1983-1984	NEJS 259b. The Jewish Response to German Culture from the Enlightenment to World War II	See NEJS 259a. Mr. Reinharz
NEJS 237a. Medieval Hebrew Poetry	□ Not offered 1983-1984	NEJS 260a. Seminar on the Philosophical Foundations of Jewish Ethics: Ancient and Medieval	□ Not offered 1983-1984
NEJS 238aR. Major Trends in Modern Hebrew Literature	A critical study of traditional and rebellious strains in the revival period of Hebrew literature. The course will be based on poetical dramas of Ramchal, <i>Kohélet Musar</i> of Mendelssohn, <i>Epic of Glory</i> of Y.L. Gordon. Special attention will be given to the Enlightenment and comparison between classicism, romanticism and realism as unfolded in the various literary creations. Mr. Brandewin	NEJS 260b. Seminar on the Philosophical Foundations of Jewish Ethics: Modern	□ Not offered 1983-1984
NEJS 254a. The Structure of Jewish History	□ Not offered 1983-1984	NEJS 262a. Problems in the Sociology of the American Jew	□ Not offered 1983-1984
NEJS 254b. The Problem of Modern Anti-Semitism	□ Not offered 1983-1984	NEJS 266a. The Rise of Denominations in Modern Judaism	□ Not offered 1983-1984
NEJS 256a and b. Seminar on the Dynamic Structure of Israeli Society	□ Not offered 1983-1984	NEJS 272a. History of the Jews of Venice, I	An examination of some key problems in Jewish history in the light of the experience of the Jews of Venice in the context of the general social, political and economic history of that city. Topics include: the attitude of the church and state toward the Jews, the institution of the ghetto, Jewish merchants and money lenders, the Marranos and the inquisition, raison d'état and the admission of the Jews to Western Europe and North America. Attention will also be paid to techniques of archival research. Mr. Ravid
NEJS 258a. Seminar on the Jews of Modern France	□ Not offered 1983-1984		
NEJS 258b. Seminar on Modern Jewish History and Historiography	□ Not offered 1983-1984		
		NEJS 272bR. History of the Jews in Venice	□ Not offered 1983-1984
		NEJS 273a. Jewish Survival in Medieval Europe	□ Not offered 1983-1984

NEJS 287a. American Modernity and Jewish Identity	□ Not offered 1983-1984	324a and b. Readings in Hebrew Literature	Mr. Brandwein
The following courses, offered in the Department of Classical and Oriental Studies, are of special interest to NEJS students studying in the fields of Ancient Near East, Semitics, and Biblical Studies. Please consult CLORS for descriptions.		325a and b. Readings in Biblical Texts	Mr. Sarna
Akkadian 101. Elementary Akkadian	Ms. Morrison	326a and b. Readings in Biblical Literature	Mr. Fishbane
Akkadian 103a. Advanced Akkadian II: Second Millennium Texts	□ Not offered 1983-1984	327a and b. Readings in Ancient Near Eastern Civilizations	Mr. Young
Egyptian 101. Elementary Egyptian	Mr. Żabkar	328a and b. Readings in Ancient Near Eastern Languages	Mr. Young
CLORS 100. Archaeology of the Ancient Near East and Aegean	□ Not offered 1983-1984	330a and b. Readings in the Sociology of the Jewish Community	Mr. Sklare
CLORS 111. Archaeology of Syria-Palestine	□ Not offered 1983-1984	331a and b. Readings in Yiddish Literature	Mr. Szulkin
CLORS 145bR. From Alexander the Great to Cleopatra VII	□ Not offered 1983-1984	332a and b. Readings in American Jewish History	Mr. Jick
CLORS 160a. Ancient Egyptian Religion	Mr. Żabkar	333a and b. Readings in the History of the Jews in Europe to 1800	Mr. Ravid
CLORS 165a. Introduction to the History and Civilization of the Ancient Near East	□ Not offered 1983-1984	334a and b. Readings in Modern Jewish History	Mr. Reinharz
NEJS 319-340. Reading Courses	Special tutorials for advanced graduate students.	335a and b. Readings in East European Jewish History	Staff
319a and b. Readings in Judaeo- Arabic Literature	Mr. Ivry	337a and b. Readings in Talmudic and Midrashic Literature	Mr. Kimelman
320a and b. Readings in Islamic Philosophy	Mr. Ivry	338a and b. Readings in Second Commonwealth and Hellenistic Judaism	Mr. Katchen
321a and b. Readings in Medieval Jewish Philosophy	Mr. Fox	339a and b. Readings in Ottoman History and Civilization	Mr. Levy
322a and b. Readings in Modern Jewish Philosophy	Mr. Fox	340a and b. Readings in Modern Middle Eastern History	Mr. Levy
323a and b. Readings in Jewish Thought	Mr. Fox	NEJS 401-411. Dissertation Colloquium	Independent research for the Ph.D. degree. 401. Mr. Brandwein 407. Mr. Young 402. Mr. Fox 408. Mr. Jick 403. Mr. Ivry 409. Mr. Fishbane 404. Mr. Reinharz 410. Mr. Ravid 405. Mr. Sarna 411. Mr. Levy 406. Mr. Sklare

The Hornstein Program In Jewish Communal Service

Objectives

The two-year program in Jewish Communal Service, leading to the Master of Arts degree, integrates Jewish studies and professional training, preparing students for positions in a variety of settings in the Jewish community, including federations, community centers, Hillel foundations, schools and other communal organizations.

A special one-year master's program is offered for students with graduate degrees in social work or Jewish studies. In addition, part-time study is permitted, but students must complete the program in no more than four years.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Hornstein Program in Jewish Communal Service. In addition, applicants are expected to submit results of either the Graduate Record Examination or the Miller Analogies Test, a statement which describes the applicant's Jewish training and background and future plans, and a sample of written material. Applicants are expected to arrange for a personal interview.

Faculty

Associate Professor
Bernard Reisman,
Director:
American Jewish
communal studies.

Professor
Marvin Fox:
Jewish philosophy,
Rabbinic thought,
Modern Jewish
thought.

Visiting Professor
Alvin Schiff:
Jewish education.

Professor
Marshall Sklare:
Sociology of the Jew-
ish community.

Associate Professor
Leon A. Jick: Ameri-
can Jewish history.

Assistant Professor
**Jonathan S.
Woocher:**
Contemporary Juda-
ism, Jewish identity.

Lecturer
Joshua Elkin:
Jewish education.

Lecturer
Mildred Guberman:
Field work, Jewish
communal service.

Lecturer
Daniel Margolis:
Jewish education

Lecturer
Susan Shevitz:
Jewish education.

Lecturer
Bennett Solomon:
Jewish education.

See the Department of
Near Eastern and
Judaic Studies and the
Heller School catalog
for other faculty and
course offerings.

Degree Requirements

Master of Arts

Students in the Jewish Communal Service program may concentrate in one of the following three areas:

1. Group Work and Community Organization.
2. Management.
3. Jewish Education.

Program of Study.

Students are expected to complete a minimum of 14 courses, including study in the following areas: professional studies, contemporary Jewish studies and classical Jewish studies. Students may take courses at other Boston area graduate schools (Boston University and Boston College).

During intersession between the first and second terms of each year, students are expected to participate in 1) the *Betty Starr Colloquium on National Jewish Communal Organizations*, a two-day field trip for first-year students to visit national offices and meet with the staffs of major Jewish communal organizations in New York City, in order to examine their activities and roles in the American Jewish communal system; 2) the *Sumner N. Milender Seminar in Jewish Communal Leadership*, led by a prominent leader in Jewish communal service for several days of discussion and workshops on campus on aspects of Jewish communal leadership; and 3) *Management and Social Work Modules*, one week mini-courses dealing with specific practical skills and issues on an intensive basis.

Residence
Requirement.

These are offered jointly by the Management of Human Services Program of the Florence Heller School and other area schools of social work. All students are required to enroll for at least one module each year.

The residence requirement for this program is two years of full-time study or the equivalent in part-time study.

Language
Requirement.

Fluency in Hebrew is required at a level comparable to two years of college training. Students not meeting this requirement upon entrance are required to enroll in courses in Hebrew language — *not for credit*.

Summer Study in
Israel.

The *Joseph and Esther Foster Seminar in Israel on Contemporary Jewish Life* is sponsored in cooperation with the Center for Jewish Education in the Diaspora of the Hebrew University and is required of all students at the completion of their first year of study. The 4½-week program, held during May and June, is a combination of classes and field visits designed to provide an in-depth analysis of Israel. Costs for the Israel Seminar are partially subsidized by scholarships provided by the Joseph and Esther Foster Fund. Students are expected to pay the remainder of the cost.

Fieldwork/Internship.	Students have two fieldwork experiences in a Boston area-Jewish educational or communal service organization. In the first year, fieldwork is 15 hours a week; in the second year, 20 hours. This schedule requires students to be in residence through the end of May and to plan for a shorter winter intersession than indicated in the University's Academic Calendar.	Substantive Paper.	Students are required, during the second year, to submit a major substantive paper growing out of some phase of their fieldwork experience. The paper should analyze a practical issue in Jewish communal service in light of both the student's own experience and the relevant literature.
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Courses of Instruction

JCS 53bR. Introduction to Talmud	See NEJS 53bR. Mr. Kimelman	JCS 159b. Administration in Jewish Education	□ Not offered 1983-1984
JCS 114a. The Book of Amos	See NEJS 144a. Mr. Sarna	JCS 160a. The Emergence of the American Jewish Pattern, 1654-1967	See NEJS 160a. Mr. Jick
JCS 119b. Curriculum/Philosophy of Jewish Education	□ Not offered 1983-1984	JCS 161a. American Jewish Life and Institutions	See NEJS 161a. Mr. Sklare
JCS 120b. Intermediate Talmud	See NEJS 120b. Mr. Kimelman	JCS 166a. Modern Jewish History to 1880.	See NEJS 166a. Mr. Reinhartz
JCS 121a. Jewish Education: An American Jewish Enterprise	This introductory course will examine various aspects of development of Jewish education in America, the types of Jewish schooling and organizational structures and politics, funding and communal dimensions of Jewish education. Questions of demographic shifts, the emergence of new educational settings and the effects of federal policies on Jewish schools will be explored. Mr. Schiff	JCS 166b. Modern Jewish History 1880-1948	See NEJS 166b. Mr. Reinhartz
JCS 122b. Content and Curriculum Choices for Teaching Siddur	This course will examine the relationship between subject matter and curriculum as mediated by the theological and ideological premises of Jewish groups. Specific methodologies for teaching siddur will be analyzed and students will have an opportunity to explore the implications of curricular and methodological choices in Jewish educational settings. Staff	HISTORY 183a. The Great Powers and the Middle East Since 1798	Mr. Wasserstein
JCS 127b. The Jewish Liturgy	See NEJS 127b. Mr. Kimelman	JCS 199a. The Jews of Latin America: A Historical and Contemporary Survey	□ Not offered 1983-1984
JCS 150aR. The Jewish Contribution to German Literature	□ Not offered 1983-1984	JCS 199b. World Jewry Today: The Contemporary Position of the Jewish People and Its Immediate Historical Background	□ Not offered 1983-1984
JCS 159a. Teaching/Learning in a Jewish Education Setting	□ Not offered 1983-1984	JCS 205a. Theory and Practice of Jewish Communal Service	An introduction to the field of Jewish communal service. This includes a history of Jewish communal services in this country, their relationship to Jewish traditions and to developments in the field of social welfare; the settings in which Jewish services are offered and the factors making for effective organizational performance. Mr. Reisman

JCS 205b. Theory and Practice of Jewish Communal Service.	The focus of the course is on developing a systematic approach to professional performance in Jewish communal organizations. This involves an analysis of contemporary societal developments which affect Jewish individuals and families. This analysis serves as the point of departure for assessing current programs and policies of Jewish communal agencies and for developing new programs to meet changing needs.	JCS 213b. The Jewish Tradition and Jewish Communal Service	An examination of the role which traditional Jewish values can play in shaping the perspective and work of the Jewish communal professional. The focus will be on how Jewish concepts—the sanctity of life, human dignity, community, <i>tzedakah</i> —can inform the ways in which communal workers think about and deal with critical issues affecting Jewish individuals, families and communities.
	Mr. Reisman		Mr. Woocher
JCS 206b. Principles of Informal Education and Small Groups in Jewish Communal Service	This course has two components: 1) principles of informal, experiential education as these are applicable in Jewish communal work and 2) principles of small group dynamics — leadership, group processes, individual dynamics and self-awareness of the participants as it relates to group leadership roles in Jewish communal life.	JCS 215b. Topics in American Jewish Communal Organization	See NEJS 215b. Mr. Sklare
	Mr. Reisman	JCS 216aR. Organization and Planning in the Jewish Community	□ Not offered 1983-1984
JCS 207a. The History and Ideology of the Jewish Community	□ Not offered 1983-1984	JCS 218a. Supervision in a Jewish Educational Setting	□ Not offered 1983-1984
JCS 208a. Contemporary Jewish Identity	An examination of the dynamics of Jewish identity; the changing historic and social forces which shape Jewish identity, resulting in a range of definitions of Jewishness in the contemporary era. Attention is addressed to the process by which current social institutions such as the family, Jewish education and Jewish communal programs seek to influence Jewish identity.	JCS 242b. The American Jewish Community and the Jewish Family	The Jewish family is considered an important institution in the continued viability of the American Jewish community. Current trends in the Jewish American family will be explored through the use of sociological data and concepts. The Jewish community's perception of problems in the family and communal responses and policies will also be examined.
	Mr. Woocher		Mr. Brodbar-Nemzer
JCS 209a. Issues in Jewish Communal Leadership and Policy	An exploration of several key areas of Jewish communal policy, focusing on issues facing communal leadership and the knowledge and skills which professionals can bring to bear in dealing with these. Areas to be examined include the development of leadership, inter-organizational relationships, fund-raising and allocations, community relations and Israel-Diaspora.	JCS 248c. Field Methods in Jewish Communal Service	Students are placed in selected Jewish communal organizations during the first year for two days a week of field practice. They receive individual supervision from an agency field supervisor, meet every other week with faculty for a group seminar and for periodic individual conferences.
	Mr. Woocher		Ms. Guberman
JCS 210a. Institutional Development of the American Jewish Community	□ Not offered 1983-1984	JCS 250. Field Methods in Jewish Communal Service and Jewish Education	Same as JCS 248c, except students are in field work for three days a week. Ms. Guberman and Mr. Reisman
JCS 210b. Jewish Literary Heritage	□ Not offered 1983-1984	JCS 287a. American Modernity and Jewish Identity	□ Not offered 1983-1984
JCS 211b. Topics in American Jewish History	□ Not offered 1983-1984	Seminar on Contemporary Jewish Issues	During the fall semester the seminar will meet every Wednesday from 11 a.m. to 1 p.m. During the spring semester, the seminar will meet alternate Wednesdays. <i>Non-credit.</i>
JCS 212aR. Methods and Skills in Jewish Communal Research and Evaluation	□ Not offered 1983-1984	JCS-SS 350. Foster Seminar in Israel on Contemporary Jewish Issues	Offered in cooperation with the Center for Jewish Education in the Diaspora at The Hebrew University.

Photobiology

See Photobiology (page 28).

Physics

Objectives

The graduate program in physics is designed to equip students with a broad understanding of major fields of physics and to train them to carry out independent, original research. This objective is to be attained by formal course work and supervised research projects. As the number of students who are accepted is limited, a close contact between students and faculty is maintained, permitting close supervision and guidance of each student.

Advanced degrees will be granted upon evidence of the student's knowledge, understanding and proficiency in classical and modern physics. The satisfactory completion of advanced courses will constitute partial fulfillment of these requirements. Research upon which theses may be based, with residence at Brandeis, may be carried out in the following areas:

Theoretical Physics: Quantum theory of fields; elementary particle physics; general theory of relativity; quantum statistical mechanics; thermodynamics of irreversible processes; quantum theory of the solid state, critical phenomena and phase transitions.

Experimental Physics: High energy experimental physics; atomic and molecular physics; solid state physics; nuclear magnetic resonance; phase transition phenomena; liquid crystal physics; light scattering; positron physics; radio astronomy; biophysical structure analysis.

Admission

As a rule, only candidates for the Ph.D. degree will be accepted. The general requirements for admission to the Graduate School apply to candidates for admission to the graduate area in physics. Admission to advanced courses in physics will be granted following a conference with the student at entrance.

Faculty

Professor
Jack S. Goldstein,
Chair:
Astrophysics.

Professor
Stephan Berko:
Positron interactions
in solids. Positronium
physics.

Professor
Donald L. D. Caspar
(Rosenstiel Basic Medical
Sciences Research
Center):
Structural molecular
biology, X-ray
crystallography.

Professor
Jacques Cohen:
Computer science.
Programming language,
Non-numerical algorithms.

Professor
Stanley A. Deser:
Quantum theory of
fields, Elementary
particles.
Supergravity.

Professor
Marcus T. Grisaru:
Quantum field theory.
Elementary particles.
Supergravity.

Professor
Eugene P. Gross:
Quantum theory of
multiparticle systems.
Quantum theory of
solids. Kinetic theory.
Plasma physics.

Professor
Peter Heller:
Solid state experimental
physics. Phase
transitions. Spin
systems.

Professor
Lawrence E. Kirsch
(Director, Feldberg
Computer Center):
High energy experimental
physics.

Professor
Hugh N. Pendleton:
Mathematical physics.
Supergravity.

Professor
Alfred G. Redfield
(Rosenstiel Basic Medical
Sciences Research
Center):
Magnetic resonance.
Biophysics.

Professor
Howard J. Schnitzer:
Elementary particle
theory, Quantum theory
of fields

Professor
Silvan S. Schweber:
Quantum theory of
measurement. History
of science.

Associate Professor
James R. Bensinger:
Experimental high
energy physics.

Associate Professor
Karl F. Canter:
Experimental low
energy positron physics
in atomic and
many-body systems.

Associate Professor
Max Chretien:
Computer science.

Associate Professor
Robert V. Lange:
Biophysics. Visual
perception.

Associate Professor
Robert B. Meyer:
Liquid crystal physics.

Adjunct Associate
Professor
**Lawrence M.
Schwartz:**
Theoretical solid state
physics. Electronic
structure of disordered
systems.

Associate Professor
John F. C. Wardle:
Radio astronomy.
Cosmology.

Associate Professor
**Hermann F.
Wellenstein:**
Experimental atomic
physics. Electronic
impact spectroscopy.

Assistant Professor
Laurence F. Abbott:
Elementary particle
theory, Quantum theory
of fields.

Assistant Professor
Mitchell L. Model:
Artificial intelligence.

Assistant Professor
Takashi Odagaki:
Theoretical solid state
physics.

Assistant Professor
Richard A. Poster:
Experimental elementary
particle physics.

Assistant Professor
David H. Roberts:
Extragalactic
astronomy.

Adjunct Assistant
Professor
Naomi B. Schmidt:
Computer science.

Assistant Professor
Leigh Sneddon:
Theoretical solid state
physics.

Assistant Professor
James A. Storer:
Computer science.

Degree Requirements

Master of Arts

Program of Study. The requirements for advanced degrees in the Department of Physics are as follows:

1. One year in residence as a full-time student.
2. Six semester courses of advanced work in physics. A thesis on an approved topic may be accepted in place of a semester course.
3. Satisfactory performance in the Qualifying Examination.

Qualifying Examinations.

In the first year, Quantum Mechanics (Physics 102) and Electromagnetic Theory (Physics 101) must be taken by all students unless they are exempted. All students, whether exempted or not, must take the final examinations in these courses (both fall and spring semesters), which also serve as the qualifying examination although the course itself is not required. An oral examination given at the end of the first year completes the qualification requirements.

Course Requirements

At least two graduate courses, with final examinations in the specialized courses listed below, must be taken during the first three semesters: (1) Statistical Physics, (2) Solid State Physics, (3) Biophysics, (4) Elementary Particles, (5) Astrophysics, (6) Experimental Physics (Physics 109), (7) General Relativity. Note, however, that not all of the above courses will necessarily be given each year.

Doctor of Philosophy

1. Two years in residence as a full-time student.
2. Nine semester courses of advanced work in physics.
3. Outstanding performance on the qualifying examination.
4. Passing of an advanced examination in topics related to the student's thesis subject. This examination will normally be taken after preparatory studies in the prospective field of research.
5. Doctoral thesis and final oral examination.

Advanced Examinations.

One semester of Advanced Quantum Mechanics (Physics 202a) will be a required course for all students.

Advanced examinations will be in topics partitioned in the several areas of research interests of faculty. Faculty members working in each general area will function as a committee for this purpose and will provide information about their work through informal discussions and seminars. The advanced examination requirement consists of a written paper and an oral examination. While no original research by the student is expected, it is hoped that a proposal for a possible thesis topic will emerge. It is generally expected that the candidates will take the advanced examination in the field they wish to pursue for their Ph.D. theses, although there may be exceptions.

Program of Study and Course Requirements. Normally, first-year graduate students will elect from the 100 series; second-year students from the 200 series. To obtain credit toward residence for a graduate course taken at Brandeis, a student must achieve a final grade of "A" or "B" in that course. A student who obtains a grade lower than "B" or an "Incomplete" in two or more courses in any term will not be allowed to continue his or her studies beyond the end of that academic year. (A course from which students withdraw after midterm will be considered as "Incomplete.")

Thesis Research.

After passing the advanced examination, the student begins work with an adviser who guides his or her research program. The adviser should be a member of the Brandeis faculty but in special circumstances may be a physicist associated with another research institution. The graduate committee of the physics faculty will appoint a dissertation committee to supervise the student's research. The student's dissertation adviser will be the chair of the dissertation committee. The committee will recommend the student for admission to candidacy for the doctorate on recommendation of his or her adviser.

Residence Requirements.

A student may obtain up to one year's residence credit toward the Ph.D. requirements for graduate studies taken at another institution. No transfer residence credit will be allowed toward fulfillment of the master's requirements.

Dissertation and Final Oral Examination.

The doctoral dissertation must represent a piece of research of a standard acceptable to the faculty committee appointed for each Ph.D. candidate. The final oral examination, or defense, is an examination in which the student will be asked questions pertaining to the dissertation research.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Language Requirement.

There is no foreign language requirement for either the master's or the doctoral degrees.

Courses of Instruction

Physics 100a. Advanced Classical Mechanics	□ Not offered 1983-1984	Physics 113a. First Year Tutorial	A review of physics from the most elementary topics to those treated in other first-year graduate courses. The environment for an oral qualifying examination is reproduced in the tutorial.
Physics 101a. Electromagnetic Theory I	Electrostatics, magnetostatics, boundary value problems. Mr. Deser	Physics 113b. Second Year Tutorial	Mr. Sneddon A continuation of Physics 113a.
Physics 101b. Electromagnetic Theory II	Maxwell's equations. Quasi-stationary phenomena. Radiation. Mr. Deser	Physics 137a. Science in the Second Half of the Nineteenth Century	□ Not offered 1983-1984
Physics 102a. Quantum Mechanics I	Nonrelativistic quantum theory and its application to simple systems; the harmonic oscillator, the hydrogen atom. Perturbation theory. Mr. Berko	Physics 152bR. Biological Assembly	See Biophysics 152bR. Mr. Caspar
Physics 102b. Quantum Mechanics II	Systems of identical particles. Coupling of angular moments. Scattering theory. Time-dependent perturbation theory. Semi-classical analysis of interaction of atomic systems and electromagnetic waves. Mr. Berko	Physics 200a. General Relativity I	□ Not offered 1983-1984
Physics 103a. Statistical Physics	Review of thermodynamics and probability theory. Statistical postulates and ensembles. Behavior of non-ideal gases. Correlation functions, fluctuation theorems, Weiner-Khintchine theorem, generalized Nyquist relations. Mean-field theories of phase transitions; effect of fluctuations, Ginzburg criterion. Mr. Redfield	Physics 200b. General Relativity II	□ Not offered 1983-1984
Physics 104aR. Solid State Physics	The formal description of periodic systems. The vibrational and electronic properties of solids. Electron dynamics on the Fermi surface. The mean field theory of magnetic solids. Mr. Odagaki	Physics 202a. Advanced Quantum Mechanics	Baby quantum mechanics. Graphical version of time-dependent perturbation theory. Application of group theory to quantum mechanics. Nonrelativistic field theory. Mr. Pendleton
Physics 107bR. Particle Physics	□ Not offered 1983-1984	Physics 202b. Relativistic Quantum Field Theory	Scalar fields, Dirac fields, gauge fields. Quantum electrodynamics. Regularization and renormalization. Path integral methods. Quantum chromodynamics and flavordynamics. Grand unified theories. Mr. Abbott
Physics 108b. Introduction to Astrophysics	□ Not offered 1983-1984	Physics 204b. Advanced Solid State Physics	□ Not offered 1983-1984
Physics 109a. Advanced Laboratory I	Methods and techniques of experimental research. Mr. Hurd	Physics 207a. Plasma Physics	Electrodynamics and statistical mechanics of plasmas: the dielectric tensor, dispersion relations, and plasma kinetic equations. Topics in plasma astrophysics, magnetic fusion, and solid state plasmas. Mr. Gross
Physics 109b. Advanced Laboratory II	Methods and techniques of experimental work. Mr. Hurd	Physics 209a. Laboratory Seminar I	Analysis of some important recent experiments. Mr. Sinclair
Physics 110a. Mathematical Physics	□ Not offered 1983-1984	Physics 209b. Laboratory Seminar II	Analysis of some important recent experiments. Mr. Young.

Physics 210a and b. Theoretical Seminar I, II	Analysis of important recent developments in theoretical physics. Mr. Schnitzer	Physics +16. Experimental Solid State Physics	Mr. Heller
Physics 213a and b. Tutorial in Physics I, II	Staff	Physics +17. Experimental Solid State Physics	Mr. Sneddon
Physics 240b. Seminar in Biophysical Research	See Biophysics 200b. Mr. Caspar	Physics 418. Experimental Solid State Physics	Mr. Gross
Physics 311a. Advanced Topics in Mathematical Physics	□ Not offered 1983-1984	Physics 419. Experimental Solid State Physics	Mr. Lange
Research Courses		Physics 420. Experimental Solid State Physics	Mr. Odagaki
Physics 405. Experimental Elementary Particle Physics	Mr. Poster	Physics 421. Relativity	Mr. Deser
Physics 406. Experimental Elementary Particle Physics	Mr. Bensinger	Physics 422. Mathematical Physics	Mr. Grisaru
Physics 407. Experimental Elementary Particle Physics	Mr. Kirsch	Physics 423. Mathematical Physics	Mr. Schweber
Physics 408. Theoretical Elementary Particle Physics	Mr. Abbott	Physics 424. Mathematical Physics	Mr. Pendleton
Physics 409. Theoretical Elementary Particle Physics	Mr. Deser	Physics 425. Statistical Physics	Mr. Gross
Physics 410. Theoretical Elementary Particle Physics	Mr. Grisaru	Physics 426. Astrophysics	Mr. Goldstein
Physics 411. Theoretical Elementary Particle Physics	Mr. Pendleton	Physics 427. Astrophysics	Mr. Roberts
Physics 412. Theoretical Elementary Particle Physics	Mr. Schnitzer	Physics 428. Astrophysics	Mr. Wardle
Physics 413. Theoretical Elementary Particle Physics	Mr. Schweber	Physics 429. Structural Biology	Mr. Casper
Physics 414. Experimental Solid State Physics	Mr. Berko	Physics 432. Experimental Atomic and Molecular Physics	Mr. Wellenstein
Physics 415. Experimental Solid State Physics	Mr. Canter	Physics 436. Biophysics	Mr. Redfield
		Physics 437. Experimental Condensed Matter Physics	Mr. Meyer

Politics

Objectives

The graduate program in Politics, leading to the degree of Doctor of Philosophy, emphasizes comprehensive professional training by stressing both the fundamentals of the discipline grounded in the study of political thought and institutions and the requirements of method and analytical skills.

Faculty

Professor
Donald Hindley,
Chair:
Comparative politics;
South East Asia; Latin
American politics.

Professor
Robert J. Art:
International relations;
American foreign
policy.

Professor
Robert H. Binstock:
American politics.

Professor
Seyom Brown,
Graduate Director:
International relations;
American foreign
policy.

Professor
Robert O. Keohane:
International relations;
Political
economy.

Professor
Roy C. Macridis:
Comparative politics;
Western Europe.

Professor
Ruth S. Morgenthau:
Comparative politics;
Africa.

Professor
Peter Woll:
American politics;
Administrative law.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Normally, the student's undergraduate training must be in a field of social sciences to be considered for admission to this program. Applicants are expected to take the Graduate Record Examination.

Associate Professor
Mark L. Hulliung:
Political theory.

Associate Professor
Martin A. Levin:
American politics;
Urban politics.

Associate Professor
Susan M. Okin:
Political theory.

Associate Professor
Ralph Thaxton:
Comparative politics;
Peasants and
revolution

Assistant Professor
Jeffrey Abramson:
Political theory; Constitutional law.

Assistant Professor
Steven Burg:
Comparative politics;
U.S.S.R.; Eastern
Europe.

Assistant Professor
Elliot Feldman:
Comparative politics;
Public policy.

Assistant Professor
Thomas Ilgen:
International relations;
Political
economy.

Degree Requirements

Master of Arts

No one will be accepted in the program who is not a doctoral candidate. However, the M.A. degree may be awarded upon satisfactory completion of one year of residence, the demonstration of proficiency in one foreign language, and the submission of an approved specimen of graduate-level scholarly writing to the department. In certain cases the department will counsel the student to complete his or her graduate studies program with a terminal M.A.

Doctor of Philosophy

Students should note certain special features of the program, in particular, (a) instruction in small seminars under close faculty supervision, (b) supervised independent study facilities within the department, (c) supervised teaching assistantships, (d) opportunities for study in the consortium of universities in the Boston area, and (e) the opportunity to incorporate work in related and relevant fields, e.g. economics, anthropology, philosophy. Each student is assigned to a departmental adviser who will help plan a professional and pertinent program of study. A continuity of faculty direction is insured throughout the program with allowance for shifts in curricular interest.

Program of Study.

The student must complete two years in residence and a minimum of twelve semester courses. Students with an M.A. in political science from other institutions may petition at the end of one year to have their previous graduate courses accepted for Brandeis credit; this may relieve them of as much as a year of residence requirement. (However, they must satisfy all Brandeis requirements: distribution of curriculum, language, etc.) For distribution, each graduate student will be required to take three of the following fields: American Government, Comparative Government, International Relations, Political Theory and/or Methods, or two of the above plus a category of study at the graduate level in another department of the University, as shall be judged valid for the student's program by this department. (See below for a further clarification of the fields of distribution.)

Within each of the three fields chosen, graduate students will normally take at least two semester courses. The standard work load for full-time students is at least three courses in each semester of their first two years of study. Fourth courses and audits are encouraged, but the load is deliberately set so that the student may supplement his or her regular course work with independently motivated reading and scholarship. Reading courses will not be offered to first-semester students and will be generally discouraged during the first year. By the end of the first year, students should have identified their major and at least one of their minor fields of interest, and should make this known to their adviser and the Graduate Studies Chairman. (In the case of entering M.A.'s, a complete program should be worked out by the end of the first semester.)

Language Requirements.	By the end of the first year of study, the student is expected to demonstrate proficiency in one approved foreign language. (Quantitative methods may be offered in lieu of one of the foreign languages but <i>not</i> for purposes of obtaining the M.A. degree.) Proficiency in two foreign languages must be demonstrated prior to admission to Ph.D. candidacy. Language proficiency must be demonstrated at Brandeis and certified by the department. Foreign language courses may not be counted for academic credit.	Dissertation and Defense.	The dissertation will be completed under the supervision of the appropriate member of the departmental faculty. It must be sponsored by a departmental committee of at least two members and have the approval of the graduate committee of the department. It is assumed that the writing of the dissertation will take at least one year and, barring exceptional circumstances, not more than two and one-half years. The student must successfully defend the dissertation at a final oral examination conducted by his or her two departmental supervisors and another professor from outside the department or from another university.
Evaluation of First Year.	At the end of each student's first year in the graduate program, there will be a consultation between the student and at least two members of the department to evaluate the student's academic progress, and to help plan the student's subsequent work.	Teaching Assistantships.	As determined by funds and undergraduate enrollments, the department compensates students for teaching assistant work in an amount customarily based on need. First-year students do not normally receive teaching assistantships. It is the policy of the department that teaching experience is a normal and necessary part of the graduate training program and that ideally all students should have this opportunity regardless of compensation.
Research Paper.	Each second-year graduate student is required to submit a high-quality research paper, which must be approved in its final version by two members of the department (appointed by the graduate adviser in consultation with the student) before the student will be allowed to take the comprehensive Ph.D. qualifying examinations.	Fields and Sub-Fields.	As stated above, curricular distribution is based on four major fields. Within the broad range of American Government, special concentrations may be achieved in such areas as urban studies, public administration and policy, institutions of government, parties and pressure groups, constitutional law. The student specializing in Comparative Government should have command of the important theories and theoretical techniques, and cluster of institutions or processes, such as development, political economy, or parties and bureaucracies, as well as familiarity with a designated geographical area. In International Politics, the student also needs a broad mastery of the principal theories, together with a specialization in such topics as international sub-systems, diplomatic history, security policy, political economy, comparative foreign policy, or American foreign policy, etc. In Theory and/or Methods, the student should be closely familiar with a major section of the history of political thought (ancient or modern) and the theories therein presented and developed, or may place primary emphasis on the so-called "scope methods of modern political science." This latter category implies not just the knowledge of quantitative techniques but an ability to criticize their application and a general grasp of the intellectual climate in which the philosophy of social science has developed.
Candidacy for the Ph.D.	<p>A student may be admitted to candidacy for the Ph.D. degree upon completing the course and research paper requirements, passing the qualifying examination, fulfilling the language requirement and obtaining departmental approval of the subject and preliminary precis of the dissertation.</p> <p>Normally at the end of the fourth semester or early in the fifth, a formal oral and written examination for candidacy for the Ph.D. will be given covering the student's three fields but with emphasis on the sub-fields in which the student has done the most work. Each of the examinations is individual: it responds to the approved program of the student. The written examinations may be taken, upon arrangement, within any four-month period. The orals are taken no later than two weeks after the last written examination. Students are examined orally in their three fields simultaneously.</p> <p>However, each student must complete the Ph.D. qualifying examinations by the end of his/her fifth semester in the program, and must submit a dissertation prospectus by the end of the sixth semester. Any extension must be specifically granted by the Graduate Committee.</p>		<p>The possibility of particular concentrations and emphases within the four major fields above will, of course, vary with the course offerings and the supervisory capacities of the departmental faculty.</p>

Courses of Instruction

Courses and Seminars for Graduate Students

Politics 203a. **Seminar: Comparative Politics** □ Not offered 1983-1984

Politics 204b. **Seminar: International Politics** □ Not offered 1983-1984

Politics 205a. **Seminar: American Politics** An examination of the approaches, concepts and theories in the field of American politics.
Mr. Levin

Politics 206b. **Seminar: Political Theory** An examination of the approaches and concepts in the field of political theory.
Mr. Hulliung

Politics 240a. **Politics of Africa** Approaches to African politics, from conquest to independence, from nationalist revolt to search for legitimacy. Country case studies include Nigeria, Ivory Coast, Tanzania and South Africa. Readings include issues in foreign policy.
Ms. Morgenthau

Politics 248b. **Political Institutions** □ Not offered 1983-1984

Politics 251b. **Politics and Modernization: Issues in Autonomy and Dependency** What policies and structures promote balanced or distorted development? How valid are quantitative indicators of modernization? Readings include topics in demography, agricultural policy and industrialization. Students focus on case studies.
Ms. Morgenthau

Politics 254a. **The Politics of Food Security** Course considers why growth does not necessarily assure an end to hunger, and asks what policies promote adequate production and equitable distribution of food supplies. Readings focus on international as well as national attempts to secure access to food at acceptable prices. How food policy affects rise and fall of governments is examined in case studies.
Ms. Morgenthau

Politics 256b. **European Political Systems** □ Not offered 1983-1984

Politics 270b. **The Third World in the Global Economy**

Prospects for Third World development within the global economy. The legacies of colonialism. Impact of the Bretton Woods system on the new states, and demands for a new international economic order. Contemporary concerns over energy, commodity price stabilization, trade preferences, technology transfer, debt and multinational enterprises.

Mr. Ilgen

Politics 271b. **Multinational Enterprise and National Power**

The political implications of the growth of multinational enterprises, involving raw materials and manufacturing, often tying together trade and investment. Effects on national and international politics of the decline in economic power perceived by sovereign states.

Ms. Morgenthau

Politics 297a. **Section 1. Comparative Political Ideologies**

An examination of selected political theories and theorists and the translation of theories into political movements. Emphasis will be placed on the latter with reference to liberal, Marxist and conservative parties in the 19th and 20th centuries. Students will be asked to make presentations on aspects of such movements.

Mr. Macridis

Politics 297b. **Section I. Topics in Law and Political Theory**

This course will deal with issues at the intersection of law and political philosophy, choosing from among such topics as democracy and judicial review, church-state relations and individual rights vs. community values.

Mr. Abramson

Politics 297b. **Section II. Issues in Third World Politics**

Advanced readings in politics and society of non-Western countries. Emphasis on state development and popular responses to the growth of the state. Case studies to be drawn from Asian, African, Middle Eastern and Latin American contexts.

Mr. Thaxton.

Politics 301-319a and b. **Readings in Politics**

301a and b.	311a and b.
Mr. Binstock	Mr. Levin
302a and b.	*312a and b.
Mr. Brown	Mr. Keohane
303a and b.	313a and b.
Mr. Hindley	Mr. Abramson
305a and b.	314a and b.
Mr. Macridis	Mr. Burg
306a and b.	*315a and b.
Ms. Morgenthau	Mr. Feldman
308a and b.	316a and b.
Mr. Woll	Mr. Ilgen
*309a and b.	318a and b.
Mr. Art	Ms. Okin
310a and b.	319a and b.
Mr. Hulliung	Mr. Thaxton

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Politics 401-414. Dissertation Research	Independent research for the Ph.D. degree 401. Mr. Binstock 409. Mr. Art 402. Mr. Brown 410. Mr. Huihung 403. Mr. Hindley 411. Mr. Levin 405. Mr. Macridis 412. Mr. Keohane 406. Ms. Morgenthau 413. Ms. Okin 408. Mr. Woll 414. Mr. Thaxton		Politics 130b. Soviet Domestic Politics Mr. Burg
			Politics 134b. The Arab-Israeli Conflict Mr. Levy
In addition, the following advanced undergraduate courses may be taken for graduate credit.			Politics 144b. Political Change in Latin America II Mr. Hindley
Politics 111a. The American Congress	Mr. Woll		Politics 147a. Government and Politics of China Mr. Thaxton
Politics 115a. History of American Constitutional Law	Mr. Abramson		Politics 150a. Government and Politics of Southeast Asia Mr. Hindley
Politics 115b. American Constitutional Law Theory: Seminar	Mr. Woll		Politics 162a. Evolution of International Systems, 1815-1945 Mr. Schuker
Politics 116b. Civil Liberties in America	Mr. Abramson		Politics 166bR. Issues in International Political Economy Mr. Ilgen
Politics 117a. Administrative Law	Mr. Woll		Politics 167bR. International Law and Conflict Resolution Mr. Stanislawski
Politics 121b. Limits of the Market and Public Intervention	Mr. Levin		Politics 168aR. American Foreign Relations in the Twentieth Century Mr. Schuker
Politics 122b. Policy Analysis and Policy Implementation	Mr. Levin		Politics 173a. China in World Politics Mr. Thaxton
Politics 123bR. Urban Criminal Justice	Mr. Levin		Politics 184a. Utopia and Power in Modern Political Theory Mr. Huihung
Politics 125a. Political Change in Afro-American Communities	Mr. Pouncey		
Politics 128aR. Contemporary Peasant Revolutions	Mr. Thaxton		

Psychology

Objectives

The graduate program in Psychology leads to the degree of Doctor of Philosophy. The goal of the program is to develop competent research psychologists and teachers who will become contributors to knowledge in psychology. Toward this end, an emphasis is placed on research activity, starting in the first semester of graduate study. The program of study reflects a belief that the student should develop an area of research specialization and also should be exposed to a range of topics in general psychology. Dissertation supervision is available in the following areas: Sensation, Perception, Memory, Learning, Thinking, Comparative, Developmental, Personality, Psychopathology, Social Psychology, Linguistics and Cognitive Science.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

An undergraduate major in psychology is not required. Students with inadequate preparation may make up their deficiencies during their first year, but without residence credit. Students are admitted on a competitive basis which includes evaluation of previous academic record, recommendations, results of the Graduate Record Examination (Aptitudes and Psychology Achievement Tests).

Faculty

Professor
Arthur Wingfield,
Chair,
Human memory Cognitive processes.

Professor
Ray S. Jackendoff,
Chair, Program in
Linguistics and Cognitive Science;
Linguistics, Semantic theory, Music.

Adjunct Professor
Ashton Graybiel

Professor
James R. Lackner,
Director, Spatial Orientation Laboratory;
Human experimental psychology,
Psycholinguistics

Professor
Leslie Z. McArthur,
Director,
Social/Developmental:
Social psychology,
Interpersonal attraction.

Professor
Rocardo B. Morant,
Director, Experimental/Physiological;
Experimental psychology, Perceptual mechanism, Sensation and perception.

Professor
Zick Rubin;
Social psychology,
Interpersonal relationships.

Professor
Visiting Professor
Edgar Zurif;
Neurolinguistics,
Psycholinguistics.

Associate Professor
Maurice Hershenson;
Perception, Developmental theory.

Associate Professor
Raymond Knight;
Clinical psychology,
Experimental psychopathology.

Associate Professor
Joan Maling;
Linguistics, Syntactic theory, Historical syntax, Metrics.

Associate Professor
Jerome Wodinsky;
Comparative psychology, Learning theory, Sensory physiology.

Assistant Professor
Teresa M. Amabile;
Social psychology,
Creativity.

Assistant Professor
Michael Berbaum;
Group problem-solving and decision-making.

Assistant Professor
Joseph Cunningham;
Developmental psychopathology.

Assistant Professor
Jane B. Grimshaw;
Linguistics, Language acquisition.

Assistant Professor
Marjorie Lachman;
Life-span development, Adult personality.

Assistant Professor
James Todd;
Layout and motion perception.

Degree Requirements

Doctor of Philosophy

Program of Study.

Although there is a two-year minimum residency requirement, four years of full-time graduate study are usually required for the Ph.D. The student is expected to carry the equivalent of twelve credit units per semester during residency.

Research.

Each student will devote one-quarter of his or her time to research the first semester of the entering year. For all subsequent semesters, students shall devote a minimum of one-half time to research.

Research Reports.

Students will submit reports on their research for the preceding year, in journal form, in time to permit evaluation of the first project by the end of the third semester, and of the second project by the end of the fifth semester. In the event that a student's first-year research report is unsatisfactory, the student will be required to take a terminal master's degree completed not later than the end of the fourth semester of residence. Students who have satisfactorily

completed the research requirements will be permitted to continue their work toward the doctorate with no formal requirement of a master's degree.

Course Requirements.

Entering students shall take *two seminars* and Psychology 210a in the first semester of residence, one seminar and Psychology 210b in the second semester. After that they shall take two seminars per semester in the second year, and one each semester thereafter until admitted to candidacy for the doctorate. Course selection will not be restricted to the Psychology Department, but will be arranged by the student in consultation with the faculty adviser.

Qualifying Examinations.

During the student's third year, he or she will be examined in the historical, theoretical and empirical literature related to the student's area of specialization, broadly conceived. The chairman of the department, in consultation with the student and adviser, will appoint a three-member committee to administer the qualifying examination. The examination may be in either oral or written form. In the event that the student fails his or her qualifying examination, he or she will be awarded a ter-

	<p>minal master's degree on the basis of an adequate second-year research paper. A student may petition the department to take the examination a second time if necessary.</p>	<p>The dissertation should provide evidence of originality, scholarship and research ability. It should be a contribution to knowledge, ordinarily an experimental investigation, but not necessarily so. Upon submission to the chair of the department of a copy of the thesis, signed by all members of the thesis committee, and a successful defense of the thesis before all members of the department, the award of the Ph.D. will be recommended to the Faculty Council of the Graduate School.</p>
Breadth Requirement.	<p>All graduate students must demonstrate breadth in the field of psychology before being admitted to candidacy for the Ph.D. This breadth requirement may be fulfilled by demonstrating competence in at least six of the nine areas listed below. The requirements may be satisfied in any of three ways:</p> <ol style="list-style-type: none"> By having completed an undergraduate course in that area, By completing an undergraduate course offered in that area at Brandeis, By successfully passing the equivalent of any undergraduate final examination for that course. Of the six courses, a minimum of two should be taken for areas in Group A and a minimum of two from Group B. <p>Group A</p> <ol style="list-style-type: none"> Physiological/Sensory Processes Perception Learning/Comparative Cognition/Memory Cognitive Science/Linguistics <p>Group B</p> <ol style="list-style-type: none"> Developmental Social Personality Abnormal 	<p>Ph.D. in Psychology Ph.D. in Psychology with Specialization in Linguistics and Cognitive Science.</p> <p>This program focuses on the development of formal theories of mental representation. It emphasizes the unity behind approaches to mind within cognitive psychology and linguistics, with attention to the important contributions of computer science and philosophy. Application should specifically mention an interest in this program.</p> <p>The degree requirements are as given above, except in the following respects:</p>
	<p>Course Requirements.</p> <p>Entering students shall take Psychology 208a in the first or second year of residence; fourth semester students shall take Psychology 216b, in which they present their research. Selection of other courses will be arranged by the student in consultation with the faculty adviser.</p>	
	<p>Breadth Requirements.</p> <p>The areas in which a student must demonstrate competence are:</p> <ol style="list-style-type: none"> Two out of three <ol style="list-style-type: none"> Syntax Semantics Phonology Two out of three <ol style="list-style-type: none"> Perception Cognition Cognitive Development One out of three <ol style="list-style-type: none"> Psycholinguistics Language Acquisition Neuropsychology One out of three <ol style="list-style-type: none"> Logic Philosophy of Mind/Language Computer Science 	
Teaching Assistantship Requirements.	<p>All students must work as a teaching assistant for a minimum of four courses, including the course Introductory Psychology, and at least one of the following courses: Statistics, Experimental, Developmental, Cognitive Processes, Sensory Processes, Perception, Social Personality or Abnormal.</p>	
Language Requirement.	<p>There is no foreign language requirement.</p>	
Admission to Candidacy.	<p>A student may be admitted to candidacy for the doctorate upon fulfilling the above requirements.</p>	
Dissertation and Defense.	<p>Following the completion of all examinations, the student will prepare a prospectus of the proposed dissertation study in consultation with a faculty dissertation sponsor. The prospectus may be based on preliminary research conducted prior to the student's admission to candidacy for the doctorate. Upon approval by the faculty of the department, a dissertation committee of three or more members will be appointed by the department chair, including the dissertation sponsor as chair of the committee. The dissertation sponsor will be responsible for advising the student throughout the performance of his or her work, in consultation with the remaining members of the committee at appropriate times in the course of the work. From time to time, the committee will report the student's progress to the department faculty.</p>	

Courses of Instruction

Psychology 123a. Psychology of Pictorial Representation	□ Not offered 1983-1984	Psychology 140b. Social Psychology and Social Policy	This course will consider theory and research in several areas of social psychology, including social motivation, social cognition, attitude formation and change, social equity and sex roles. It will explore the implications of each of these for the planning, implementation and evaluation of social policy with concentration on the areas of health, education, family policy, criminal justice, employment and aging. Enrollment limited to 20.
Psychology 130bR. Life-span Development: Adulthood and Old Age	Seminar on advanced topics in life-span developmental theory and methodology. Substantive emphasis will be on intellectual and personality changes that occur in the second half of life. Ms. Lachman	Psychology 145b. Aging in a Changing World	□ Not offered 1983-1984 Ms. McArthur
Psychology 131b. Social Development	□ Not offered 1983-1984	Psychology 154aR. Human Memory	□ Not offered 1983-1984
Psychology 132bR. Cognitive Development	□ Not offered 1983-1984	Psychology 155aR. Visual Space Perception	□ Not offered 1983-1984
Psychology 133aR. Altruism and Prosocial Behavior	□ Not offered 1983-1984	Psychology 156bR. Perceptual Development	The seminar will discuss recent theories and studies designed to investigate the development of space and object perception in infancy. Adult perception is unitary. We see for example, the texture that we feel and feel the form of what we see. How perception got to be that way is the core question to be examined through a review of the literature on neonate and infant behavior. Enrollment limited to 15. Mr. Morant
Psychology 134b. Perspectives on Parental Behavior	□ Not offered 1983-1984	Psychology 160b. Seminar on Sex Differences	□ Not offered 1983-1984
Psychology 135bR. Seminar in Social Cognition	□ Not offered 1983-1984	Psychology 161a. Mental Health in the United States: Field Work I	This course, in conjunction with Psych. 161b, provides an intensive, supervised practicum experience in the provision of mental health services. Students pursue a program of reading and spend one day a week working in a clinical facility. Weekly class meetings are structured to provide opportunities for personal and professional growth through discussion of individual experiences in the clinical setting. Enrollment limited to 20. Mr. Cunningham
Psychology 136aR. Advanced Topics in Developmental Psychology	In this seminar, students will discuss in depth selected topics and issues in the field of developmental psychology and will read some of the classic and pivotal papers relating to those topics. Enrollment limited to 20. Mr. Watson	Psychology 161b. Mental Health in the United States: Field Work II	A continuation of Psych. 161a. Enrollment limited to 20. Mr. Cunningham
Psychology 137b. Social Interaction	□ Not offered 1983-1984		
Psychology 138a. Seminar: Conceptions of Social Relationships	An examination of social relationships, including parent-child relationships, friendship, marriage and work relationships, viewed in the context of psychology, social structure and culture. Attention will be given to research strategies for studying social relationships, and students will be encouraged to conduct their own research. Enrollment limited to 15. Mr. Rubin		
Psychology 139bR. Development of Play and Imagination	□ Not offered 1983-1984		

Psychology 162a. Psychosomatics	The objective of this course is to provide the student with an understanding of psychological and socio-cultural factors in physical illness. Following discussion of the concepts of stress and disease, the attempt to answer three questions will form the basis of the course: What determines the stressfulness of a particular situation for a given individual? What are the psychophysiological mediators to alteration in body function? What psychobiological factors determine which particular organ system will be affected?	Psychology 180b. Seminar: Writing and the Social Sciences	Examines the range of writing in the social sciences, both "popular" and "scholarly," including journal articles, dissertations, books, magazine articles, newspaper columns and life studies. Students write and exchange feedback on short pieces, with a view toward preparing work for publication. Frequent visits by social scientists, writers and editors.
	Mr. Giddon		Messrs. Rubin and Zola
Psychology 165b. Culture and Cognition	See Anthropology 161b. Ms. Irvine	Psychology 193bR. Tests and Measurements	This course covers test theory, types of measurement, the theory and measurements of reliability and validity, and test construction. The measurements of intelligence, achievement and personality are also considered. Mr. Knight
Psychology 166b. Psychopathology and Cognition	□ Not offered 1983-1984	Psychology 194b. Language and Mind	An examination of Noam Chomsky's approach to the theory of language, <i>concentrating on the notion of innate ability to learn human languages</i> . This course will discuss philosophical and psychological consequences of Chomsky's theory, discussing applications of his conceptual framework to the study of other human activities such as reasoning, perception, sensory-motor coordination and the understanding of music. Mr. Zurif and Ms. Grimshaw
Psychology 167b. Schools of Psychotherapy	Theories and techniques of several schools of psychotherapy and behavior modification are considered. The theories of personality, methods of intervention, goals of therapy and relevant research will be emphasized. Mr. Knight	Psychology 195a. Psychological Theory	A survey of psychological theories including Associationism, Structuralism, Functionalism, Gestalt, Behaviorism, Psychoanalysis, and their modern derivatives. Emphasis is on the nature of explanation and the methods by which it is achieved Mr. Hershenson
Psychology 168a. The Psychology of Creativity	□ Not offered 1983-1984	Psychology 196a. Research Methods in Social Psychology	□ Not offered 1983-1984
Psychology 169b. Disorders of Childhood	□ Not offered 1983-1984	Psychology 197a. Language Acquisition and Development	When a child knows a language he or she has successfully constructed a grammar of it: in the course of constructing the grammar the child must form hypotheses about the language and test them against the data. The central problem of language acquisition is to explain what makes this formidable task possible. In the course, we will study and evaluate theories of language acquisition in this light, basing our conclusions on recent research in the development of syntax, semantics and phonology. The overall goal is to arrive at the coherent picture of the kinds of hypotheses children make, and the kinds of strategies they use as they progress toward mastery over their language. Ms. Grimshaw
Psychology 171a. Biological Bases of Motivation	Mr. Wodinsky	Psychology 198b. The Language of Thought	□ Not offered 1983-1984
Psychology 172aR. Temporal Patterning of Behavior	□ Not offered 1983-1984		
Psychology 173a. Psycholinguistics	An introduction to modern psycholinguistics with an emphasis on speech comprehension and production. The question of critical periods for language acquisition and biological specialization for language behavior in man are also considered. Mr. Zurif		
Psychology 175b. Recent Advances in Animal Behavior	□ Not offered 1983-1984		
Psychology 176b. Light, Color and Vision	□ Not offered 1983-1984		
Psychology 177a. Biological Basis of Behavior	□ Not offered 1983-1984		

98	Psychology		
Psychology 199aR. Introduction to Neuropsychology	This course is designed as an introduction to the field of neuropsychology. Topics will include the concepts of cerebral dominance and localization of function within the human brain, with special reference to language and related mental function. The aphasic syndromes will receive special attention, including their symptoms, progress, brain localization and concomitant cognitive disorders.	Psychology 210b. Advanced Psychological Statistics II	Statistical procedures for quasi and non-experimental research. Correlation and regression, multiple regression, partial and multiple correlation, the analysis of contingency tables (cross-tabulations), nonparametric statistics. Computer data analysis using SPSS and BMDP. <i>Prerequisite:</i> Psychology 210a or permission of the instructor.
	Mr. Wingfield		Mr. Berbaum
Psychology 200a and b. Observation and Research Strategies in Psychology	□ Not offered 1983-1984	Psychology 211a. Seminar in Infant Development	□ Not offered 1983-1984
Psychology 204a. Research Methodology for Developmental and Social Psychology		Psychology 212a. Concepts and Methods of Psychophysiology	□ Not offered 1983-1984
Psychology 205a. Seminar in Perceptual Development	The seminar will examine recent theories and experimental studies designed to investigate the ontogenetic development of space and object perception and sensory-motor interaction.	Psychology 213b. Cognition and the Brain	We shall study hemispheric specialization, its evolution, development, variations in relation to age, sex and handedness. We shall rely on clinical findings from symptoms caused by brain damage and normative findings from laterality testing of intact people. Our objectives will be to resolve basic questions about how high mental function is represented in the brain (localization vs. mass action, specific vs. nonspecific connectivity), and study the nature of the brain organization in terms of interaction between separate brain systems. The course will be based both on readings and on illustrative cases.
	Mr. Morant		Mr. Kinsbourne
Psychology 206b. Computer Methods in Psychological Experimentation	□ Not offered 1983-1984	Psychology 216b. Research Seminar in Cognitive Sciences	In this seminar, students will present and discuss their ongoing research. Staff
Psychology 207a. Seminar in Perception	□ Not offered 1983-1984	Psychology 220-237. Courses in Research	
Psychology 208a. Proseminar: Issues in Cognitive Science	□ Not offered 1983-1984	220a and b. Research in Spatial Orientation	Mr. Lackner
Psychology 209aA. Seminar in Research Problems in Psychology	□ Not offered 1983-1984	221a and b. Research in Semantics and Conceptual Structure	Mr. Jackendoff
Psychology 210a. Advanced Psychological Statistics I	Probability and inferential statistics for experimental research. Rules of probability, random variables and their distributions, statistical inference, tests of hypotheses and confidence intervals for population means, principles of experimental design, the analysis of variance. Introduction to computer analysis using the SPSS and BMDP statistical packages	222a and b. Research in Human Spatial Orientation	Mr. Morant
	Mr. Berbaum	223a and b. Research in Social Psychology	Mr. Rubin
		224a and b. Research in Speech Perception and Cognitive Processes	Mr. Wingfield
		225a and b. Research in Visual Information Processing	Mr. Hershenson

226a and b. Research in Cognitive Processes and Psychopathology	Mr. Knight		Psychology 280-297. Advanced Readings	280a and b. Mr. Lackner 281a and b. Mr. Morant 282a and b. Mr. Rubin 283a and b. Mr. Wingfield 284a and b. Mr. Hershenson 285a and b. Mr. Knight 286a and b. Ms. McArthur 287a and b. Mr. Wodinsky 288a and b. Mr. Watson	289a and b. Mr. Jackendoff 290a and b. Ms. Maling 291a and b. Ms. Amabile 292a and b. Mr. Berbaum 293a and b. Mr. Cunningham 294a and b. Ms. Grimshaw 295a and b. Ms. Lachman 296a and b. Mr. Todd 297a and b. Mr. Zurif
227a and b. Research in Neurolinguistics and Psycholinguistics	Mr. Zurif				
228a and b. Research in Syntax and Comparative Germanic	Ms. Maling				
229a and b. Research in Person Perception	Ms. McArthur				
230a and b. Research in Animal Behavior	Mr. Wodinsky		Psychology 300a. Research in Social and Developmental Psychology	Social/Developmental Staff	
231a and b. Research in Social Psychology	Ms. Amabile		Psychology 310h. Topics in Data Analysis for Social Scientists	□ Not offered 1983-1984	
232a and b. Research in Developmental Psychopathology	Mr. Cunningham				
233a and b. Research in Syntax and Language Learnability	Mr. Grimshaw		Psychology 400-416. Dissertation Research	400. Mr. Lackner 401. Mr. Jackendoff 402. Mr. Morant 403. Mr. Rubin 404. Mr. Wingfield 405. Mr. Hershenson 406. Mr. Knight 407. Mr. Watson 408. Ms. Maling	409. Ms. McArthur 410. Mr. Wodinsky 411. Ms. Amabile 412. Mr. Cunningham 413. Ms. Grimshaw 414. Ms. Lachman 415. Mr. Todd 416. Mr. Berbaum
234a and b. Research in Life-span Development; Adult Personality	Ms. Lachman				
235a and b. Research in Layout and Motion Perception	Mr. Todd		In addition, the following advanced undergraduate courses may be taken for graduate credit.		
236a and b. Research in Developmental Psychology	Mr. Watson		Linguistics 100a. Introduction to Linguistics	A general introduction to linguistic theory and the principles of linguistic analysis. The central topic of the course is what speakers know about their language: syntax, semantics, and phonetics and phonology. In each area, students will construct detailed analyses of data from English and from other foreign languages, and examine their implications for a theory of languages. Additional topics such as historical linguistics and the psychological implications of linguistic theory will be covered as time allows.	
237a and b. Research in Group Problem Solving and Decision-Making	Mr. Berbaum				
Psychology 250-266. Advanced Research Project	250a and b. Mr. Lackner 251a and b. Mr. Morant 252a and b. Mr. Rubin 253a and b. Mr. Wingfield 254a and b. Mr. Hershenson 255a and b. Mr. Knight 256a and b. Ms. McArthur 257a and b. Mr. Wodinsky 258a and b. Mr. Watson	259a and b. Mr. Jackendoff 260a and b. Ms. Maling 261a and b. Ms. Amabile 262a and b. Mr. Berbaum 263a and b. Mr. Cunningham 264a and b. Ms. Grimshaw 265a and b. Ms. Lachman 266a and b. Mr. Todd		Ms. Grimshaw	
			Linguistics 100aR. Introduction to Linguistics	See Linguistics 100a. Ms. Maling	

Linguistics 110a. Phonological Theory	<p>This course is an introduction to Generative Phonology, which is a theory of natural language sound systems. It begins with a review of articulatory phonetics, followed by distinctive feature theory and the concept of a "natural class." The central section covers morphology and the nature of morphophonetics and universal properties of the rules that relate morphophonemic and phonetic representations. The course ends with discussion of a special topic such as syllable structure or word-formation.</p> <p><i>Prerequisite:</i> Linguistics 100a.</p> <p>Ms. Yip</p>	Linguistics 130a. Semantics	□ Not offered 1983-1984
Linguistics 112bR. Introduction to Historical Linguistics	<p>Principles and methods of language change and linguistic reconstruction. Readings from Grimm, Verner, Saussure, Meillet, etc. Practical exercises in comparative and internal reconstruction.</p> <p>Ms. Maling</p>	Linguistics 135aR. Linguistics and the Romance Languages	<p>This course is an introduction to the major grammatical characteristics of the Romance languages. We will study the typological properties of the Romance language family and examine some of the ways in which the individual languages differ from each other. The basic principles and techniques of generative linguistics will be used to analyze the data, which will be drawn primarily from French, Italian and Spanish. Topics include: syntax, morphology, phonology, historical development and dialect variation.</p> <p>Ms. Grimshaw</p>
Linguistics 120b. Syntactic Theory	<p>This course extends the syntactic framework developed in the introductory course through the study of such problems as the complement system and constraints on transformations, with emphasis on their relevance to universal grammar.</p> <p><i>Prerequisite:</i> Linguistics 100a.</p> <p>Ms. Maling</p>	Linguistics 140a. History of the English Language	□ Not offered 1983-1984
Linguistics 125b. Advanced Syntactic Theory	□ Not offered 1983-1984	Linguistics 199 a and b. Directed Research	Staff

Russian

See Joint Program of Literary Studies (page 59).

Sociology

Objectives

The graduate program in Sociology is primarily a doctoral program and is designed for students who intend to devote themselves to teaching and research in sociology. The student may, by satisfying certain requirements, receive the M.A. degree. The general objective is to educate students in the major areas of sociology with specialization in several of them.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Sociology Department.

In addition, all prospective students are required to submit written material (papers, etc.) representative of their best work, which need not be, however, of a sociological nature.

Faculty

Professor
Irving K. Zola,
Chair:
Sociology of health
and illness. Deviance.
Field studies.

Professor
Egon Bittner:
Sociology of law.
Social control.

Professor
Ralph Miliband:
Comparative social
structures. Political
sociology. Social and
political theory.

Professor
George W. Ross:
Political sociology.
Social theory.

Professor
Morris S. Schwartz:
Social psychology.
Social psychiatry.

Professor
Maurice R. Stein:
Communities. Cul-
ture, counseling,
consciousness.

Professor
**Emeritus Kurt H.
Wolff:**
Sociological theory.
Sociology of knowl-
edge. Phenomenology
and sociology.

Associate Professor
Gordon A. Fellman:
Marx and Freud.
Social stratification.

Associate Professor
Karen E. Fields:
Sociology of religion.
Sociology of
development.

Associate Professor
Charles S. Fisher:
Technology and
environment. Social
psychology of
consciousness.

Associate Professor
Gila J. Hayim:
Sociological theory.
Phenomenology. Exis-
tential and critical
theory. Criminology.

Assistant Professor
Asoka Bandarage:
Third World devel-
opment. Race and
ethnic relations. Soci-
ology of women.

Assistant Professor
Kathleen Barry:
Feminist theory. Fam-
ily. Sociology of
education.

Assistant Professor
Peter Conrad:
Sociology of health
and illness. Deviance.
Field methods.

Assistant Professor
Paula M. Rayman:
Urban and commun-
ity sociology. Organi-
zations and
occupations.

Assistant Professor
Shulamit Reinharz:
Qualitative methodol-
ogy. Social gerontol-
ogy. Feminist
research. Social
psychology.

Lecturer with rank of
Assistant Professor
Judith A. Rollins:
Race and ethnic rela-
tions. Sociology of
women.

Degree Requirements

Doctor of Philosophy

Program of Study.

Students entering the Ph.D. program in Sociology are expected to undertake a two-year program of course work, as a part of which they are obliged to take the departmental Pro-Seminar (Sociology 290). The initial program of studies will be arranged in consultation with the graduate student's adviser. Consideration will be given to graduate work done elsewhere but formal transfer credit will be assigned only after the successful completion of the first year of study.

Requirements for the M.A.

An M.A. may be granted after the successful completion of three semesters of course work and submission of two substantial research papers to be approved by the Department.

Residence Requirements.

The minimum residence for the degree of Doctor of Philosophy is two years. It is expected that the Ph.D. will be earned within five years.

Language Requirements.

There is no foreign language requirement for the Ph.D. degree.

Qualifying Examinations.

During a student's residency until the time of his or her formal admission to candidacy, the specific planning, evaluation and accreditation of his or her entire course of study will be in the hands of each student's Guidance-Accreditation Committee composed of three faculty members. Along with the student, this committee will lay out a general course of study designed to meet the interests and needs of the student. Upon completion of this course of study, the student will take an oral qualifying examination covering both general sociology and the areas of the student's special interests. It is assumed that students will fulfill their accreditation before the end of their third year of residence.

Admission to Candidacy.

A student shall be eligible for admission to candidacy for the Ph.D. upon fulfillment of the residence requirements, passing the departmental qualifying examination, and submission of an acceptable dissertation proposal. The work on the doctoral dissertation will be supervised by a Dissertation Committee.

Dissertation and the Final Oral Examination.

The Ph.D. dissertation may be accepted by the Department upon the recommendation of the Dissertation Committee. To be granted the degree, the student is required to defend the dissertation in a public Final Oral Examination.

Courses of Instruction

Sociology 101a. American Society	A sociological review of the nature and origins of the contemporary American crisis of confidence. Particular emphasis will be given to the sociology of the American economy, polity and state, changing stratification patterns, schooling and socialization, ethnicity and sex role definitions.	Sociology 107a. Issues in Social Psychology	This course covers the origins of social psychological theory as the study of interpersonal behavior. It contrasts sociological and psychological social psychology and examines current contributions to the discipline's content, methods and definition.
	Mr. Ross		Ms. Reinharz
Sociology 102a. Social Psychiatry	Training in peer counseling is offered through classes, supervised sessions with other students, and community work. Theory, social contexts and practice of re-evaluation counseling is stressed. Other social psychiatric approaches are also covered. Enrollment limited.	Sociology 108b. Critiques of Contemporary Society	□ Not offered 1983-1984
	Mr. Stein	Sociology 109b. Black Intellectuals and the Crisis of the Twentieth Century	□ Not offered 1983-1984
Sociology 102b. Social Psychiatry	Enrollment limited. <i>Prerequisite:</i> Sociology 102a or equivalent.	Sociology 110bR. Sociology of Knowledge	History and historical interpretation of the sociology of knowledge with particular emphasis on German and recent American literature.
	Mr. Stein		Mr. Wolff
Sociology 103aR. The Sociology of Mental Illness and Health	This course will concern itself with various sociological and psychological perspectives on the causes, nature of, and treatment for mental illness. We will also focus on the ways in which mental health is conceptualized as an internal state and an interpersonal process, and on the suggested means through which it might be achieved.	Sociology 111a. Political Sociology	□ Not offered 1983-1984
	Mr. Schwartz	Sociology 112b. Social Class, Freedom and Equality	The concept of social class; its role in determining life changes, lifestyles, income, occupation and power; theories of class and inequality; selected social psychological aspects of social class and inequality; American class structure and dynamics; American social class and imperialism.
Sociology 104aR. Sociology of Education	A study of educational institutions which examines pedagogy, educational structures and ideologies as they relate to social inequality in the broader society. This course examines the role of the institution of education as a force for social change versus the idea that education's function is to reinforce prevailing social conditions.		Mr. Fellman
	Ms. Barry	Sociology 116b. Comparative Race and Ethnic Relations	This course will examine selected issues in the origin and evolution of race and ethnic relations in the U.S. and several other countries from a historical and comparative perspective. A critical analysis of concepts (such as prejudice, exploitation), and alternative theories and strategies (such as assimilation, separatism), as well as their relevance to ethnic relations in the selected countries will be presented.
Sociology 105a. Feminist Critique of Contemporary Social Institutions I	Study of the various issues addressed in feminist activism (i.e. family, childcare, reproductive rights, employment discrimination, social construction of sexuality and lesbian rights, sexual violence) as they form a critique of social and political institutions, analysis of the structural, ideological and psychological dimensions of sex oppression.		Ms. Rollins
	Ms. Barry	Sociology 117a. Work and Society	□ Not offered 1983-1984
Sociology 105b. Feminist Critique of Contemporary Social Institutions II	□ Not offered 1983-1984	Sociology 118a. American Jewish Life and Institutions	See NEJS 161a. Mr. Sklare
Sociology 106b. Sociology of Literature	□ Not offered 1983-1984	Sociology 118b. Sociology of the American Jewish Community	□ Not offered 1983-1984

Sociology 119a. Militarism: The Arms Race and American Society	The objective of the course is to increase comprehension of the consequences of militarism and the arms race for American society. Attention will be given to the post-World War II development of militarism and its relationship to American economic, political and social institutions including focus on issues of national security, nuclear proliferation and modern disarmament activity. Messrs. Fellman and Schwartz	Sociology 130b. The Family II	□ Not offered 1983-1984
Sociology 119b. Social Change: The Nonviolent Movement	□ Not offered 1983-1984	Sociology 132a. Urban Sociology	□ Not offered 1983-1984
Sociology 120aR. Sociology of Underdevelopment I	□ Not offered 1983-1984	Sociology 132b. Urban Field Studies	□ Not offered 1983-1984
Sociology 120b. Sociology of Underdevelopment II	□ Not offered 1983-1984	Sociology 135a. Group Process	Interpretation of interpersonal behavior and group development, based in part on observation of the group itself. Readings will include material from psychology and social anthropology as well as sociology. Enrollment limited to 12 students. Mr. Schwartz
Sociology 121bR. Sociology of Mass Communications	Through an examination of the history and development of contemporary media, including television, films, print media, etc., the course will explore the impact of mass culture on everyday life. We will consider questions of audience, politics and ideology, aesthetics, and the structure of the culture industry. Ms. Taylor	Sociology 135aR. Group Process	See Sociology 135a. Section 1: Mr. Schwartz Section 2: Ms. Reinharz
Sociology 122aR. Sociology of Power	This course will discuss modern theories of power, notably those associated with pluralist, Marxist and elite theories of society and politics. Attention will be directed toward empirical evidence for and against such theories drawn from advanced industrial societies. Mr. Ross	Sociology 135b. Group Process —Advanced	□ Not offered 1983-1984
Sociology 126a. Sociology of Deviance	□ Not offered 1983-1984	Sociology 136a. Field Work in Institutions	□ Not offered 1983-1984
Sociology 126b. Planned Communities	□ Not offered 1983-1984	Sociology 136b. Field Work in Institutions	□ Not offered 1983-1984
Sociology 128b. Sociology of Religion: Sects, Cults and Societies	□ Not offered 1983-1984	Sociology 141a. Marx and Freud	□ Not offered 1983-1984
Sociology 130a. The Family I	This course presents a view of the family as a patriarchal institution and analyzes its relationship to other social institutions. Cross cultural analysis is employed to examine family forms, practice and ideas in terms of their impact on women. Critique of the family is approached through studying alternative lifestyles and violence in the family. Ms. Barry	Sociology 141b. Advanced Seminar on Marx and Freud	□ Not offered 1983-1984
		Sociology 143a. Studies in Social Interaction, The Self and Society	□ Not offered 1983-1984
		Sociology 147a. Social Psychology of Organizations and Groups	□ Not offered 1983-1984
		Sociology 148a. Social Psychology of Consciousness I	□ Not offered 1983-1984

Sociology 148b. Social Psychology of Consciousness II	This course will explore various senses of the self and of society as described in both contemporary and social psychology and traditional Eastern culture. Focus will be on knowing the world in terms of the self's relation to it as exemplified in sociological field work and in meditation. Analysis of parables as a mode of teaching these skills will be explored.	Sociology 165a. Sociology of Birth and Death	This course will explore the ways in which different societies shape the human experience of birth and death. It will focus on recent changes in the social settings and meanings of birth and death in advanced industrial societies. Topics to be covered include Eastern attitudes towards birth and death, the Holocaust and nuclear war, the social implications of medical technologies and the home birth and hospice movements.
	Messrs. Fisher and Stein		Mr. Stein
Sociology 150a. Sociology of Revolutionary Change	□ Not offered 1983-1984	Sociology 167a. Comparative Social Structures: Advanced Capitalistic Societies	A comparative examination of the development of modern capitalistic political economies stressing the relationship between patterns of economic accumulation, conflict and/or consensus between major social forces and the forms of state activity. Focus will be on the post-World War II evolution of British, French and U.S. societies, more specifically on the construction of different socioeconomic treaties in the immediate post-war period, the functioning of the consumerist social order based on these treaties, and the disruption of this order in the late 1960s and 1970s.
Sociology 150b. Sociology of Revolutionary Change	□ Not offered 1983-1984		Mr. Ross
Sociology 151b. Environmental Research: Premedical Subcultures	This course focuses on firsthand research investigations of the social world. This semester we will engage on a semester long investigation of premedical subcultures, at Brandeis and other universities. Students will be exposed to research on premedical and medical education; learn basic participant-observer, depth-interviewing and data analysis techniques; and produce research reports on their findings.	Sociology 170b. Industrial Sociology	□ Not offered 1983-1984
	Mr. Conrad		
Sociology 152b. The Sociology of Generations: The Adolescent in Society	□ Not offered 1983-1984	Sociology 171aR. Women in the Third World	This course will examine the position of Third World women in the U.S. and in Asia, Africa and Latin America from a historical and comparative perspective. The unity and diversity of the female experience will be examined in the context of socioeconomic transformations taking place in the Third World.
Sociology 155bR. Social Movement	□ Not offered 1983-1984		Ms. Rollins
Sociology 160a. Social Conflict and Its Control	This course is concerned with social conflict as it relates to class, race, ethnicity and gender; and with ways in which it is controlled, in society and by the state. Different theoretical constructs relating to social conflict will be considered with reference to contemporary societies, notably the United States and Western Europe; comparisons will be made with Soviet-type societies.	Sociology 172b. The Family in the United States	See American Studies 150b. Mr. Fuchs
	Mr. Miliband	Sociology 173b. Contemporary Social Problems	We will deal with a selected group of social problems among which will be a) the deterioration of the cities, b) the onslaught of information and misinformation, c) the trouble of consumerism, d) the burdens of racism and poverty, e) old age and social isolation. The aim of this course is to enable and encourage students to approach existing and proposed institutional arrangements critically.
Sociology 163b. Therapy and Punishment (Criminology II)	□ Not offered 1983-1984		Mr. Bittner
Sociology 164a. Existential Sociology	□ Not offered 1983-1984	Sociology 174b. Technology and the Environmental Crisis	Consideration of the changing character of contemporary technology in its own terms and as it affects both social structure and the environment. Cases may be drawn from the problems of industrial efficiency and pollution, mining the soil by agriculture, small scale or appropriate technology, waste disposal, the computer revolution, or the search for energy.
			Mr. Fisher

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Sociology 176bR. Issues in Third World Development	□ Not offered 1983-1984	Sociology 192b. Healing and Healers: Self Care/Self Help Movement	Healing and healers are not confined to any single licensed group in our society, no matter how much some would wish it to be so. This course will focus on alternatives to orthodox medicine, in particular the self-help movement and its reemergence in the last half of the 20th century. Students will be expected to carry out a field work project in regard to some aspect of the self-care and/or self-help movement.
Sociology 177b. Aging in Society	□ Not offered 1983-1984		Mr. Zola
Sociology 178a. Sociology of the Professions	□ Not offered 1983-1984		
Sociology 181a. Methods of Social Research	This course is intended to give a broad introduction to the various techniques used in doing social research. Areas to be covered include library research, content analysis, historical and comparative analyses, participant observation, survey research. A research project will be assigned to gain firsthand experience in the practical aspects of survey research. Ms. Reinharz	Sociology 196b. Seminar: Writing and the Social Sciences	See Psychology 138b. Messrs. Rubin and Zola
Sociology 185a and b. Research Methods and Statistics	See Social Welfare 4.01, 4.02. Mr. Kurtz	Sociology 200a. Classical Sociological Theory	Critical readings of the sociologies of Marx, Weber and Durkheim. Mr. Bittner
Sociology 188b. Sociology of Law	The legal order considered in a framework of cross-cultural and historical comparison. The role of the instruments of the law and of the administration of justice in contemporary society. Mr. Bittner	Sociology 200b. Contemporary Social Thought	Examination of American and European social thought: system and conflict theory, symbolic interactionism, ethnomethodology and phenomenological sociology and critical theory. Ms. Hayim
Sociology 189b. Introduction to the History of Legal Thought	□ Not offered 1983-1984	Sociology 203a. Field Methods	□ Not offered 1983-1984
Sociology 190b. On the Caring of Caretaker Institutions	An analysis of the structural arrangements of medical practice and of medical settings. Problems of communication and role relationships among professions and between patients and medical personnel will be examined. The impact of structures and role relationships on quality and quantity of medical care and on use of resources will be analyzed. Mr. Conrad	Sociology 203b. Field Methods	The methodology of sociological field research in the qualitative research tradition. Readings will include theoretical statements as well as experiential accounts of researchers in the field. The course will include specific methods and procedures of data collection (participant observation, interviewing, collaborative research, systematic observation, oral history) and data analysis. Ms. Reinharz
Sociology 191a. Health, Community, and Society	An exploration into interrelationships of the nature of society and societies on the existence and treatment of health and illness. Topics include: conceptions of health and illness, patient careers, and the place of social science in medicine. Mr. Conrad	Sociology 204a. Sociology and History	□ Not offered 1983-1984
		Sociology 205a. Sexual Stratification: Historical and Comparative Perspectives	□ Not offered 1983-1984
		Sociology 207aR. Feminist Theory	A comprehensive study of various approaches to feminist theory through an examination of ideas and writings which frame the theoretical debates in feminism today, particularly between radical feminists and socialist feminists. This course examines the relationship between theory and practice in terms of feminist activism and devotes particular attention to the intersections of race and class with sex oppression. Ms. Barry

Sociology 208aR. Seminar in the Sociology of Organization: The Industrial Labor Process	□ Not offered 1983-1984	Sociology 219b. Advanced Topics in Political Sociology	□ Not offered 1983-1984
Sociology 209b. Class and Politics	□ Not offered 1983-1984	Sociology 220b. Seminar on the Sociology of Politics	□ Not offered 1983-1984
Sociology 210a. The Sociology of Development and Underdevelopment	□ Not offered 1983-1984	Sociology 221a. Advanced Topics in Sociological Theory: Sociology of Religion	□ Not offered 1983-1984
Sociology 211a. Research on Women and Society	□ Not offered 1983-1984	Sociology 221b Topics in the Sociology of Religion	□ Not offered 1983-1984
Sociology 214aR. Topics in Social Psychology: Freud and the Freudian Tradition	An examination of the theories of psychoanalytic tradition in social psychology and their implications for social structure and change. Readings from Sigmund Freud, Anna Freud, Geza Roheim, Erik Erikson and others. "Level" of materials will be determined by students and professor, according to background and interests. Mr. Fellman	Sociology 225a. Deviance: Theories and Research	This course is a critical examination of the historical and conceptual development of sociological theories of deviance. Particular attention will be paid to the types and quality of research each perspective generated. We will assess the current state of deviance theory and research, with an emphasis on the interactionist and conflict perspectives. Mr. Conrad
Sociology 215a. The Sociology of State Action	An examination of theories and concepts which have been advanced to explain the dynamics of state action in different social and economic contexts, notably in such advanced capitalistic societies as the USA and in Soviet-type societies, notably in the USSR. Recent discussions of the degree to which the state acts independently of social and economic forces in society will be considered, as will concrete cases of state action. Mr. Miliband	Sociology 226a. Theories in Social Psychology	□ Not offered 1983-1984
Sociology 216b. Topics in Social Theory	A review of the contribution of Marxian reflection to the development of modern sociology. Stress will be placed on recent developments and on the contemporary "crisis of Marxism." Mr. Ross	Sociology 227b. Group Process Seminar	□ Not offered 1983-1984
Sociology 217a. Problems and Issues in the Sociology of Health and Illness	□ Not offered 1983-1984	Sociology 228a. Themes in Sociological Theory — Phenomenology and Sociology: Alfred Schutz	□ Not offered 1983-1984
Sociology 218a and b. Advanced Topics in Social Theory and Methods: Surrender and Catch — Experience and Inquiry Today	□ Not offered 1983-1984	Sociology 228b. Themes in Sociological Theory	□ Not offered 1983-1984
Sociology 219a. Social Systems and Political Forms: Social Conflict and its Management	□ Not offered 1983-1984	Sociology 230-252. Readings in Sociological Literature	230a and b. Mr. Bittner 231a. Mr. Miliband 233a and b. Mr. Fellman 234b. Mr. Fisher 238a and b. Mr. Ross 239a and b. Mr. Schwartz 240a and b. Mr. Stein 242a. Mr. Wolff 243a and b. Mr. Zola 245a and b. Mr. Conrad 246a. Ms. Hayim 247a and b. Ms. Barry 249a and b. Ms. Reinharz 250b. Ms. Fields 251a and b. Ms. Hayman 252a and b. Ms. Bandarage

**Sociology 290c.
Pro-Seminar**

A seminar meeting once a week in which faculty members introduce their interests and research. *Required of all first year graduate students.*

Mr. Zola

**Sociology +01-423.
Dissertation
Research**

Independent research for the Ph.D. degree

401. Mr. Bittner	415. Mr. Zola
402. Mr. Miliband	417. Ms. Fields
404. Mr. Fellman	418. Ms. Hayim
405. Mr. Fisher	419. Ms. Barry
410. Mr. Ross	420. Ms. Reinharz
411. Mr. Schwartz	421. Ms. Rayman
412. Mr. Stein	422. Ms. Bandarage
414. Mr. Wolff	423. Mr. Conrad

Spanish

See Joint Program of Literary Studies (page 59).

Theater Arts

Objectives

The Master of Fine Arts Program in Theater Arts is designed both to train and to educate—to develop skilled craftsmen of knowledge and judgment about the arts.

Professionally oriented training is offered in four theatrical disciplines: *Acting* (including an Acting/Directing option), *Design/Technical*, *Directing*, and *Dramatic Writing*.

The production program provides extensive practical experience for all students on and behind the stages of the three Spingold theaters, where the actors act, the directors direct, the designers design and construct, and the playwrights have the opportunity to see their accepted plays produced.

The Department of Theater Arts is a member of the League of Professional Theater Training Programs.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Please note, the GRE is not required for Theater Arts admission. Students apply for admission to one of the three disciplines and, in addition to the standard application procedures, Acting applicants are seen in an audition/interview, Design/Technical applicants attend an interview with portfolio evaluation, Directing applicants attend an interview and Dramatic Writing applicants submit one or more original playscripts for evaluation.

Acting, Design/Technical and Directing auditions/evaluations are held at Brandeis and, in conjunction with the League of Professional Theatre Training Programs, in Chicago, New York, New Orleans and San Francisco. Information about these auditions/evaluations will be furnished by the department *after* applications have been received; and materials from Dramatic Writing applicants will be reviewed *after* applications have been received.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the Graduate School by March 1 of their first year in residence.

Faculty

Professor
Martin Halpern,
Chair;
Playwriting and
theater history.

Professor
José Quintero,
Artistic Director,
Spingold Theater;
Directing.

Professor
James H. Clay;
Directing and theater
history.

Visiting Professor
John Bush Jones;
Dramatic theory,
literature and
criticism.

Professor
Theodore Kazanoff;
Acting and directing

Visiting Professor
Samuel Kirkpatrick;
Scenic design.

Professor
Charles W. Moore;
Acting and directing.

Associate Professor
Robert O. Moody;
Scene painting.

Associate Professor
**Maureen Heneghan
Tripp**;
Costume design

Assistant Professor
Donna Aronson;
Voice and speech.

Lecturer
Alex Davis;
Voice and speech.

Lecturer
Nancy Goldstein;
Lighting.

Lecturer
Mabel Haley;
Costume rendering.

Lecturer
Annie Loui;
Movement.

Lecturer
Annie Thompson;
Voice and speech.

Artist-in-Residence
Daniel Gidron;
Acting and directing.

Artist-in-Residence
Barbara Harris;
Stage management.

Artist-in-Residence
Theodore Janello;
Technical direction.

Artist-in-Residence
Denise Loewenguth;
Costuming.

Degree Requirements

Master of Fine Arts

Residence Requirements.

Acting: two years. Acting with Certification: three years. Design/Technical: three years. Directing: two years. Dramatic Writing: two years. Dramatic Writing with Certification: three years.

Actors normally earn the M.F.A. degree in two years. A third-year program for actors, and an acting/directing option available to selected third-year actors, is by invitation from the faculty. Playwrights also normally earn the M.F.A. in two years. A third-year program for playwrights is offered to, at most, one playwright annually on invitation from the faculty. Students may elect to accept the invitation for a third year of study, or may decline and have the two-year M.F.A. conferred. Candidates who complete the third year are granted the M.F.A. with Certification.

Programs of Study

Acting

The acting faculty provides close supervision of class and performance work for first-year actors; second-and-third year actors are the core of the acting company for mainstage and other production activities. The third year for actors may include an internship at a major theater company for one production during the academic year.

The Acting/Directing Option exists for those actors who wish a program where directing is explored with minimal technical elements. These students receive a combination of acting and directing assignments in the third year.

All actors (with the exception of first year in the first half of the first term, who are barred from performance work) are required to audition for and play as cast in all major productions, unless excused by the chairman after consultation with the director.

Actors are required to serve on a crew for one major production each year (about sixty hours); normally this crew may not be for a play in which the student is also performing. There is no crew requirement for third-year students in the Acting/Directing Option, but stage managing is recommended. Students are expected to help on crew whenever they have time, regardless of formal credit.

Courses of Instruction

Required Courses First Year:

Theater Arts 201. Seminar in Dramatic Theory, Method, Literature

Mr. Jones

Theater Arts 203. Advanced Acting Studies: I

Messrs. Kazanoff, Gidron and Moore

Theater Arts 207. Movement for the Actor: I

Includes regular fencing classes.
Ms. Loui

Theater Arts 209. Voice/Speech Studies for the Actor: I

Includes regular classes in singing and Alexander Technique.
Ms. Aronson

Theater Arts 225. Production Laboratory: I

Mr. Janello

Required Courses Second Year:

Theater Arts 204. Advanced Acting Studies: II

Includes collaborative playmaking workshop utilizing improvisational and ensemble techniques; also includes a weekly scene workshop.

Messrs. Kazanoff, Gidron and Moore

Theater Arts 208. Movement for the Actor: II

Includes regular classes in fencing.
Ms. Loui

Theater Arts 210. Voice/Speech Studies for the Actor: II

Includes regular classes in singing and Alexander Technique.
Ms. Aronson

Theater Arts 226. Production Laboratory: II

Mr. Janello

Those students interested in the Acting/Directing Option who receive faculty approval will also take:

Theater Arts 213. Directing

Permission of instructor required.
Mr. Quintero

Theater Arts 190a. A Study of Acting Theory and Method as They Relate to 20th Century Theater

Mr. Kazanoff

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Theater Arts 190b. A Study of Directing Theory and Method as They Relate to 20th Century Theater	Mr. Kazanoff	Theater Arts 214. Costume Construction	Laboratory fee to be arranged. Ms. Loewenguth
Required Courses Third Year:		Theater Arts 217. Costume Design	Ms. Heneghan Tripp
Theater Arts 301. Advanced Acting Studies: III	Includes a weekly scene workshop. Mr. Kazanoff	Theater Arts 219. Lighting: I	Laboratory fee to be arranged. Ms. Harris
Theater Arts 302. Movement for the Actor: III	Includes regular classes in fencing. Ms. Loui	Theater Arts 221. Sketching and Rendering: I	Section A: Costume Rendering Ms. Haley Section B: Set Rendering Mr. Moody
Theater Arts 303. Voice/Speech Studies for the Actor: III	Includes regular classes in singing and Alexander Technique. Ms. Aronson	Theater Arts 222. Drafting	Laboratory fee to be arranged. Mr. Janello
Theater Arts 304. Rehearsal and Performance	Mr. Kazanoff	Theater Arts 223. Scenic Painting: I	Laboratory fee to be arranged. Mr. Moody
Theater Arts 325. Production Laboratory: III	Mr. Janello	Theater Arts 225. Production Laboratory: I	Mr. Janello
Those students taking the Acting/Directing Option will take Theater Arts 301 and 304 and either 302 or 303. In addition, they will take:		Theater Arts 230. Life Drawing: I	Laboratory fee determined by enrollment. Mr. Moody
Theater Arts 202. Seminar in Dramatic Structure	Mr. Jones	Required Courses Second Year:	
Students enrolled in the Acting/Directing Option may, with the permission of the instructor, also take:		Students will take either (a) Costume Design II, Costume Construction II and Section A of Sketching and Rendering II, or (b) Scenic Painting II and Section B of Sketching and Rendering II. Faculty will determine which group of courses a student will take and, in rare instances, may recommend that a student take both groups. All students will take Lighting Design II, Stage Mechanics, Life Drawing II and Production Laboratory II.	
Theater Arts 180. Production Concepts	Mr. Clay	Theater Arts 212. Scenic Design: II	Mr. Kirkpatrick
Design-Technical	All major productions are designed by graduate students. Therefore, a student may be expected to be involved in a design capacity on at least three productions during each year. In addition, students will participate on various production crews as arranged in consultation with the faculty. The graduate design thesis (Theater Arts 310) is the final project in the Design/Technical program. In some cases a student's mainstage design assignments in the second or third year may constitute part of the thesis project.	Theater Arts 218. Costume Design: II	Ms. Heneghan Tripp
Required Courses Second Year:		Theater Arts 220. Lighting: II	Laboratory fee to be arranged. To be announced
Theater Arts 201. Seminar in Dramatic Theory, Method, Literature	Mr. Jones	Theater Arts 224. Stage Mechanics	Laboratory fee to be arranged. Mr. Janello
Theater Arts 211. Scenic Design: I	Mr. Kirkpatrick	Theater Arts 226. Production Laboratory: II	Mr. Janello

**Theater Arts 227.
Sketching and
Rendering: II**

Section A:

 Costume Rendering
Ms. Haley

Section B:

 Set Rendering
Mr. Moody

**Theater Arts 228.
Scenic Painting: II**

Laboratory fee; to be arranged.

Mr. Moody

**Theater Arts 231.
Life Drawing: II**

Laboratory fee determined by enrollment.

Mr. Moody

**Theater Arts 232.
Costume
Construction: II**

Ms. Loewenguth

Required Courses Third Year

Students will take the group of courses (*a* or *b* above) they did not take in the second year; all of these courses are listed below. All students will enroll for an Independent Study and for a Thesis Project.

**Theater Arts 212.
Scenic Design: II**

Mr. Kirkpatrick

**Theater Arts 218.
Costume Design: II**

Mr. Heneghan Tripp

**Theater Arts 227.
Sketching and
Rendering: II**

Section A:

 Costume Rendering
Ms. Haley

Section B:

 Set Rendering
Mr. Moody

**Theater Arts 228.
Scenic Painting: II**

Mr. Moody

**Theater Arts 232.
Costume
Construction**

Ms. Haley

**Theater Arts 300.
Independent Study**

Staff

**Theater Arts 310.
Thesis Projects**

Full presentation of projected designs for the scenery, costumes and lighting for a specific play or opera, presented in portfolio form, with the emphasis dependent upon the student's major field or interest.

Staff

Directing

Directing students are required to serve on two crews each year (about 120 hours). They are also required to participate in preparation of any studio, workshop or major production of their plays mounted during the time they are in residence, and this counts as one crew. In rare instances, acting in a major production may count as one crew.

Required Courses First Year:
**Theater Arts 101.
Stage Management**

Ms. Harris

**Theater Arts 203.
Advanced Acting
Studies: I**

Mr. Kazanoff

**Theater Arts 207.
Movement for the
Actor: I**

Ms. Loui

**Theater Arts 250.
Seminar in
Directing: I**

Mr. Quintero

In addition, students are required to audit the following courses:

**Theater Arts 190a.
A Study of Acting
Theory and Method
as They Relate to
20th Century
Theatre**

Mr. Kazanoff

**Theater Arts 211.
Scene Design: I**

Mr. Kirkpatrick

**Theater Arts 215.
Workshop in
Dramatic Writing: I**

Mr. Halpern

**Theater Arts 217.
Costume Design: I**

Ms. Heneghan Tripp

**Theater Arts 219.
Lighting: I**

Ms. Goldstein

Required Courses Second Year:

To be announced in the Fall Term, 1983-84. Consult department for specifics.

Dramatic Writing

Dramatic writing students are required to serve on two crews each year (about 120 hours). They are also required to participate in the preparation of any studio, workshop or major production of their plays mounted during the time they are in residence, and this counts as one crew. In rare instances, acting in a major production may count as one crew.

Theater Arts 216.
**Workshop in
Dramatic
Writing: II**

A double-credit course.

Mr. Halpern

Theater Arts 226.
**Production
Laboratory: II**

Mr. Janello

Theater Arts 310b.
Thesis Projects

One elective course in the first semester.

Mr. Halpern

Required Courses First Year:

Theater Arts 201.
**Seminar in
Dramatic Theory,
Method, Literature**

Mr. Jones

Theater Arts 215.
**Workshop in
Dramatic Writing: I**

A double-credit course.

Mr. Halpern

Theater Arts 225.
**Production
Laboratory: I**

One elective course each semester.

Mr. Janello

Required Courses Second Year:

Theater Arts 202.
**Seminar in
Dramatic Structure**

Mr. Jones

Required Courses Third Year:

Theater Arts 300.
Independent Study

Staff

Theater Arts 315.
**Workshop in
Dramatic
Writing: III**

A double-credit course.

Mr. Halpern

Theater Arts 325.
**Production
Laboratory: III**

One elective course each term.

Mr. Janello

University Organization

Board of Trustees

Under Massachusetts law, the 50-member Board of Trustees is the governing body of the University. There are also four faculty representatives and three student representatives to the Board who participate in Board meetings and have votes on the several committees. The Chairman of the Fellows, the President of the National Women's Committee, and the President of the Alumni Association serve *ex-officio*. Alumni elect annually an Alumni Term Trustee who serves as full voting Trustee for a five-year term.

The President

The President, chief executive officer of the University, appointed by the Board of Trustees and is responsible for all University activities.

Chancellor Emeritus

Chancellor Emeritus of the University is an honorary title held by Brandeis' Founding President Abram L. Sachar, whose 20 years of experience is now utilized for the welfare of the University.

University Fellows

University Fellows comprise about 400 national leaders from a broad base of business, educational and public life who lend counsel, expertise and support to University development and planning programs.

The President's Council

President's Councilors are leading men and women throughout the country whose skills and experience are placed at the disposal of the Brandeis President in areas of their special competence.

Academic Deans

The Dean of the Faculty supervises academic policy, undergraduate and graduate curricula, the faculty and its departments of instruction.

The Dean of the College of Arts and Sciences assumes responsibility for many areas affecting the academic lives of undergraduates, including curriculum development, advisory services and the academic progress of students.

The Dean of the Graduate School of Arts and Sciences oversees the individualized programs of study for scholars, scientists and artists in 20 disciplines.

The Dean of the Florence Heller School for Advanced Studies in Social Welfare oversees the academic activities of the University's first and only professional school and its work in such areas as health, aging, income and employment, and minorities.

The Faculty Senate

The Faculty Senate, the elected representative body of the faculty, discusses such issues as academic freedom and responsibility, University policy, appointments, tenure, dismissal and salaries.

The Vice Presidents

The Vice President for Administrative Affairs is responsible for providing logistical and support services to the University community such as maintenance, construction and renovation of the physical facilities; security; personnel; purchasing and other services.

The Vice President and University Treasurer oversees Brandeis' complete financial structure, prepares financial condition statements for the President, Board of Trustees and related governing committees and serves as principal liaison with the banking and finance communities.

The Vice President for Development and University Relations is responsible for directing the institutional mission of the University — its educational objectives, programmatic research and capital requirements — and articulating its long and short range needs to the various constituencies.

The Vice President for Financial Affairs is responsible for the annual operating budget, controllership and accounting, and information systems and data processing.

Alumni Relations

The Office of Alumni Relations, located in the Gryzmish Academic Center, directs and coordinates programs and publications for all Brandeis alumni, the National Alumni Association, regional Alumni Chapters and the Alumni Fund.

National Women's Committee

The National Women's Committee, now an organization of more than 65,000 members, has been a partner with the University since 1948. This volunteer organization gives its membership a wide range of educational offerings. These include unique study group programs with syllabi provided by Brandeis faculty; adult education seminars in local communities called "University on Wheels;" and special lectures by University speakers. The 125 chapters across the country are embassies of good will for the University. The central commitment of the Women's Committee, however, is to the Brandeis University libraries. Since it was founded by eight members in Boston, it has contributed more than 21 million dollars in support of the libraries.

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Clara*
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Harpham**
Assistant Professor of
English and American
Literature (on the Mellon
Foundation)
*Ph.D., University of Cali-
fornia, Los Angeles*
- Barbara A. Harris**
Artist-in-Residence
(Theater Arts)
M.F.A., Yale University
- Michael Harris*****
Associate Professor of
Mathematics
*Ph.D., Harvard
University*
- Erica Harth**
Associate Professor of
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Literature
*Ph.D., Columbia
University*
- K. C. Hayes**
Associate Professor of
Biology and Director,
Foster Biomedical
Research Laboratories
*Ph.D., University of
Connecticut*
- Gila J. Hayim***
Associate Professor of
Sociology
*Ph.D., University of
Pennsylvania*
- Peter Heller**
Professor of Physics
*Ph.D., Harvard
University*
- Michael J. Henchman**
Associate Professor of
Chemistry
Ph.D., Yale University
- James B. Hendrickson,**
Professor of Chemistry
*Ph.D., Harvard
University*
- Maureen Heneghan**
Associate Professor of
Costume Design
- Lynna Hereford**
Adjunct Assistant Profes-
sor of Biology and
Rosenstiel Basic Medical
Sciences Research Center
Ph.D., Yale University
- Patricia Herlihy**
Visiting Associate Profes-
sor of History
*Ph.D., University of
Pennsylvania
(Harvard University)*
- Maurice Hershenson**
George and Frances
Levin Associate Profes-
sor of Psychology
Ph.D., Yale University
- Betty Hillmon**
Lecturer in African and
Afro-American Studies
*M.A., Fresno State
University*
- Donald Hindley**
Professor of Politics
*Ph.D., Australian
National University*
- Eli Hirsch**
Visiting Associate Profes-
sor of Philosophy and
History of Ideas
*Ph.D., New York Univer-
sity (Long Island
University)*
- Thomas C.
Hollocher Jr.****
Professor of
Biochemistry
*Ph.D., University of
Rochester*
- David M. Hoose**
Lecturer with rank of
Assistant Professor of
Music
*B.M., Oberlin College
Conservatory of Music*
- Benjamin B. Hoover**
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fornia, Berkeley*
- Judith A. Houde**
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Education
*M.S. Ed., University of
Tennessee*
- Mark L. Hulliung**
Associate Professor of
Politics
*Ph.D., Harvard
University*
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Associate Professor of
Anthropology
*Ph.D., Northwestern
University*
- Alan J. Hurd**
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sor of Physics
*Ph.D., University of
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- Louis Iandoli**
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Assistant Professor of
French and Italian
Ph.D., Yale University
- Kiyoshi Igusa****
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*Ph.D., Princeton
University*
- Thomas Ilgen**
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Politics
*Ph.D., University of Cali-
fornia, Santa Barbara*
- Robert Indik*****
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*Ph.D., Princeton
University*
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Pennsylvania*
- Alfred L. Ivry**
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- Ray S. Jackendoff*****
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Associate Professor of
Anthropology
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- Pierre-Yves Jacopin**
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- Theodore Janello**
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Connecticut*
- William P. Jencks**
Gyula and Katica
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chemistry and Molecular
Pharmacodynamics
M.D., Harvard University
- Leon A. Jick**
Helen and Irving
Schneider Associate Pro-
fessor of Jewish
Studies
*Ph.D., Columbia
University*
- William A. Johnson**
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fessor of Philosophy and
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*Ph.D., Columbia
University*
- Patricia A. Johnston***
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Studies
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fornia, Berkeley*
- John Bush Jones**
Lecturer with rank of
Professor (Theater Arts)
*Ph.D., Northwestern
University*
- Peter C. Jordan**
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Ph.D., Yale University
- George Joseph**
Assistant Professor of
French
Ph.D., Indiana University
- William Kapelle**
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History
*Ph.D., University of
Massachusetts*
- Edward K. Kaplan**
Associate Professor of
French
*Ph.D., Columbia
University*
- Kathleen M. Karrer**
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Biology
Ph.D., Yale University
- Aaron L. Katchen*****
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Studies
*Ph.D., Harvard
University*
- Janet E. Kaufman**
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(Guberman Fellow)
*Ph.D., American
University*
- Michael Kaufman**
Adjunct Associate Profes-
sor in University
Studies
*Ph.D., University of
Michigan*
- Theodore L. Kazanoff**
Professor of Theater Arts
M.A., Smith College
- Philip M. Keehn**
Associate Professor of
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Ph.D., Yale University
- Allan R. Keiler**
Associate Professor of
Music
*Ph.D., Harvard
University*
- Alice A. Kelikian***
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History
*D. Phil., Oxford
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- Morton Keller**
Samuel J. and Augusta
Spector Professor of
History
*Ph.D., Harvard
University*
- Robert Owen
Keohane*****
Professor of International
Relations
*Ph.D., Harvard
University*
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Assistant Professor of
History
*Ph.D., Harvard
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the Tauber Institute
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University*
- Reuven R. Kimelman**
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- Charles Kindleberger**
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- Denise King**
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Education
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University*
- Marcel Kinsbourne**
Adjunct Professor of
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D.M., Oxford University
- Sam Kirkpatrick**
Jacob Ziskind Visiting
Professor of Theater Arts
*National Diploma,
London*
- Lawrence E. Kirsch***
Professor of Physics and
Director, Feldberg Com-
puter Center
Ph.D., Rutgers University
- Karen Wilk Klein*****
Associate Professor of
English
*Ph.D., Columbia
University*
- James Kloppenberg**
Assistant Professor of
History
*Ph.D., Stanford
University*
- Raymond Knight**
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Psychology
*Ph.D., University of
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- Avraam Koen**
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*M.A., University of
Chicago*
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Lecturer in Near Eastern
and Judaic Studies
*M.L.S., University of
Chicago*
- On leave Fall Term
1983-84*
On leave Spring Term
1983-84**
On leave 1983-84***

- Kenneth Kustin**
Professor of Chemistry
Ph.D., University of Minnesota
- Margie Lachman*****
Assistant Professor of Psychology
Ph.D., Pennsylvania State University
- James R. Lackner*****
Meshulam and Judith Riklis Professor of Psychology
Ph.D., Massachusetts Institute of Technology
- Robert V. Lange**
Associate Professor of Physics
Ph.D., Harvard University
- Richard H. Lansing**
Associate Professor of Italian and Comparative Literature
Ph.D., University of California, Berkeley
- Kevin S. Larsen,**
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Ph.D., Harvard University
- Lorraine Ledford,**
Lecturer in Spanish
M.A., Harvard University
- Judy Lee****
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Ph.D., State University of New York, Binghamton
- Denise Levertov**
Fannie Hurst Poet-in-Residence
- Martin A. Levin**
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Ph.D., Harvard University
- Harold I. Levine**
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Ph.D., University of Chicago
- Jerome P. Levine**
Professor of Mathematics
Ph.D., Princeton University
- Lawrence Levine**
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- Norman E. Levine**
Associate Professor of Physical Education
B.S., Bates College
- Alan Levitan**
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- Zavdi L. Lichtman**
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- Denah L. Lida**
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Ph.D., University of Mexico
- Blanche Linden-Ward**
Lecturer with the rank of Assistant Professor of American Studies
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- Nicholas Linfield**
Lecturer with the rank of Assistant Professor of English
Ph.D., University of Texas
- Henry Linschitz**
Helena Rubinstein Professor of Chemistry
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- John E. Lisman**
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Ph.D., Massachusetts Institute of Technology
- Elaine P. Loeffler****
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- Denise Loewenguth**
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- Annie Loui**
Lecturer in Movement (Theater Arts)
- John M. Lowenstein**
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- Susan Lowey**
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- James Luckett**
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- Robert S. Lurie**
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- Roy C. Macridis**
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- Joan M. Maling**
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- Frank E. Manuel**
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- Eve E. Marder**
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- Daniel Margolis**
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- Peter Markman**
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- Robert L. Marshall**
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Ph.D., Princeton University
- Danielle Marx-Scouras**
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- Gloria Jane Mason**
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- Teruhisa Matsusaka**
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- John F. Matthews*****
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A.B., University of Cincinnati
- Alan L. Mayer**
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Ph.D., Princeton University
- Leslie Ann McArthur**
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- Colquitt L. Meacham**
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- Sarah Mead**
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- Teresa Méndez-Faith**
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- James B. Merod**
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Ph.D., Stanford University
- Robert B. Meyer**
Associate Professor of Physics
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- Marvin Meyers**
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- Christopher Miller**
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- Mitchell L. Model*****
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- Paul H. Monsky**
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- Robert O. Moody Jr.**
Associate Professor of Theater Arts
- Charles W. Moore**
Professor of Theater Arts
M.F.A., Yale University
- Ricardo B. Morant**
Minnie and Harold L. Fierman Professor of Psychology
Ph.D., Clark University
- Ruth Schachter Morgenthau**
Adlai E. Stevenson Professor of International Politics
Ph.D., Oxford University
- Martha A. Morrison**
Assistant Professor of Classical and Oriental Studies and Petrie Term Assistant Professor of University Studies
Ph.D., Brandeis University
- Leonard C. Muellner**
Associate Professor of Classical and Oriental Studies
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- David W. Murray**
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- Joan L. Nissman**
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- Edward C. Nowacki**
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Ph.D., Brandeis University
- Wellington W. Nyangoni****
Associate Professor of African and Afro-American Studies
Ph.D., Howard University
- Kevin O'Brien**
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B.A., Tufts University
- Takashi Odagaki**
Assistant Professor of Physics
Dr. Sc., Kyoto University
- Susan Moller Okin*****
Associate Professor of Politics
Ph.D., Harvard University
- James D. Olesen**
Associate Professor of Music
B.A., University of Chicago
- On leave Fall Term 1983-84*
On leave Spring Term 1983-84**
On leave 1983-84***

- Richard J. Onorato**
Associate Professor of English
Ph.D., Harvard University
- Sanford E. Ostroy**
Adjunct Professor of Biology
Ph.D., Case Western Reserve
- Richard S. Palais**
Professor of Mathematics
Ph.D., Harvard University
- Hugh N. Pendleton**
Professor of Physics
Ph.D., Carnegie Institute of Technology
- Peter A. Petri**
Associate Professor of Economics
Ph.D., Harvard University
- Conrad Pope**
Assistant Professor of Music
M.F.A., Princeton University
- Richard A. Poster**
Assistant Professor of Physics
Ph.D., University of California, Los Angeles
- Hillard Pouncey****
Assistant Professor of African and Afro-American Studies
Ph.D., Massachusetts Institute of Technology
- Alex T. Prengel Jr.**
Lecturer with rank of Assistant Professor of Computer Science
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- Joan L. Press***
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- Robert O. Preyer***
Professor of English
Ph.D., Columbia University
- Lawrence B. Pulley**
Assistant Professor of Economics
Ph.D., University of Virginia
- José Quintero**
Spingold Professor of Theater Arts and Director, Spingold Theater
B.A., City College of Los Angeles
- Dominique Rabaté**
Lecturer in French
M.A., Ecole Normale Supérieure
- Esther Ratner**
Lecturer with rank of Assistant Professor of French
Ph.D., Brandeis University
- Judith Rauchwarger**
Assistant Professor of Spanish
Ph.D., University of Michigan
- Benjamin C. I. Ravid**
Jennie and Mayer Weisman Associate Professor of Jewish History
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- Mary Ruth Ray**
Artist-in-Residence (Music)
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- Paula M. Rayman*****
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- Alfred G. Redfield**
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Ph.D., University of Illinois
- Jehuda Reinharz**
Richard Koret Professor of Modern Jewish History
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- Shulamit Reinharz**
Assistant Professor of Sociology
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- Bernard Reisman**
Associate Professor of American Jewish Communal Studies and Director, Hornstein Program
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- Margret E. Rey**
Adjunct Professor of English
- Rhonda Rider**
Artist-in-Residence (Music)
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- David H. Roberts**
Assistant Professor of Astrophysics
Ph.D., Stanford University
- Marguerite S. Robinson***
Professor of Anthropology
Ph.D., Harvard University
- Nicholas Rodis**
Professor of Physical Education
Ed.M., American International College
- Vivian J. Rohrl**
Visiting Professor of Anthropology
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- Judith Rollins**
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- Michael Rosbash****
Associate Professor of Biology
Ph.D., Massachusetts Institute of Technology
- Steven Rosenberg**
Assistant Professor of Mathematics
Ph.D., University of California, Berkeley
- Myron Rosenblum**
Professor of Chemistry
Ph.D., Harvard University
- Robert Rosenblum**
Adjunct Associate Professor of Legal Studies
Ph.D., University of Colorado
- George W. Ross**
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Ph.D., Harvard University
- Ellen K. Rothman**
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- Zick Rubin**
Louis and Frances Salvage Professor of Social Psychology
Ph.D., University of Michigan
- Murray Sachs**
Professor of French
Ph.D., Columbia University
- Benson Saler**
Associate Professor of Anthropology
Ph.D., University of Pennsylvania
- Peter W. Samal**
Lecturer in Chemistry
Ph.D., Tufts University
- Nahum M. Sarna**
Dora Golding Professor of Biblical Studies
Ph.D., Dropsie College
- Susan Scheinberg**
Assistant Professor of Classical and Oriental Studies
Ph.D., Harvard University
- Daniel Schenker**
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- Alvin I. Schiff**
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Ph.D., Yeshiva University (Yeshiva University)
- Jerome A. Schiff**
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- Robert F. Schleif**
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- Naomi B. Schmidt**
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Ph.D., University of Rochester
- David C. Schoepf**
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- John E. Schrecker**
Associate Professor of History
Ph.D., Harvard University
- Stephen A. Schuker**
Professor of History
Ph.D., Harvard University
- Barney K. Schwalberg****
Professor of Economics
Ph.D., Harvard University
- Lawrence M. Schwartz*****
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Ph.D., Harvard University
- Morris S. Schwartz**
Mortimer Gryzmish Professor of Human Relations
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- Gerald W. Schwarz**
Professor of Mathematics
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- Silvan S. Schweber**
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Ph.D., Princeton University
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Ph.D., New York University
- James C. Scovel**
Assistant Professor of Mathematics
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- Erik Selsing**
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Ph.D., Purdue University
- C. S. Seshadri**
Jacob Ziskind Visiting Professor of Mathematics
Ph.D., Bombay University (Bombay University)
- Harold S. Shapiro**
Walter W. Naumburg Professor of Music
A.B., Harvard University
- Susan Shevitz**
Lecturer in Jewish Education
Ed.M., Harvard University

On leave Fall Term 1983-84*
On leave Spring Term 1983-84**
On leave 1983-84***

- William Shipman**
Instructor in Physical Education
B.A., University of North Carolina
- Marianne L. Simmel**
Adjunct Professor of Psychology
Ph.D., Harvard University
- Marshall Sklare,**
Klutznick Family Professor of Contemporary Jewish Studies and Sociology and Director, Center for Modern Jewish Studies
Ph.D., Columbia University
- John H. Smith**
Professor of English
Ph.D., University of Illinois
- Wilma Smith**
Artist-in-Residence (Music)
- Leigh Sneddon**
Assistant Professor of Physics
D. Phil., University of Oxford
- Barry B. Snider**
Associate Professor of Chemistry
Ph.D., Harvard University
- Bennett Solomon**
Lecturer in Jewish Education
Ed.D., Harvard University
- Frederic T. Sommers**
Harry A. Wolfson Professor of Philosophy
Ph.D., Columbia University
- Howard Stanislawski**
Adjunct Assistant Professor of Politics
Ph.D., Brandeis University
- Christopher W. Stark**
Lecturer with rank of Assistant Professor of Mathematics
Ph.D., University of Michigan
- Susan Staves**
Associate Professor of English
Ph.D., University of Virginia
- Colin Steel**
Professor of Chemistry
Ph.D., Edinburgh University
- Maurice R. Stein**
Jacob S. Potosky Professor of Sociology
Ph.D., Columbia University
- David Joel Steinberg*****
Adjunct Professor of History
Ph.D., Harvard University
- Robert Stevenson**
Professor of Chemistry
D.Sc., Glasgow University
- Douglas J. Stewart**
Professor of Classical and Oriental Studies
Ph.D., Cornell University
- Alan Stolzenberg**
Assistant Professor of Chemistry
Ph.D., Stanford University
- Lyman Stookey**
Adjunct Associate Professor of Legal Studies
L.L.M., Boston University
- James A. Storer**
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Ph.D., Princeton University
- Deborah Stott**
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Ph.D., Columbia University
- Martha Strom**
Fannie Hurst Lecturer with rank of Assistant Professor of English and American Literature
Ph.D., Princeton University
- Louis S. Stuhl**
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Ph.D., Cornell University
- Carol L. Such**
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- Edith Sullivan**
Adjunct Assistant Professor of Psychology
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- Mary E. Sullivan**
Lecturer in Physical Education
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- Peter Swiggart****
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Ph.D., Yale University
- Michael Swirsky**
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- Andrew G. Szent-Györgyi**
Professor of Biology
M.D., University of Budapest
- Robert Szulkin**
Associate Professor of Russian
Ph.D., Harvard University
- Gabriela A. Taylor**
Lecturer in Sociology
M.A., University of Leicester
- Ralph Thaxton Jr.**
Associate Professor of Politics
Ph.D., University of Wisconsin
- Serge N. Timasheff**
Professor of Biochemistry
Ph.D., Fordham University
- Caldwell Titcomb**
Professor of Music
Ph.D., Harvard University
- Ian A. Todd**
Associate Professor of Classical and Oriental Studies
Ph.D., University of Birmingham
- James T. Todd**
Assistant Professor of Psychology
Ph.D., University of Connecticut
- Saul Touster**
Joseph M. Proskauer Professor in Law and Social Welfare and Director, Legal Studies Program
J.D., Harvard University
- Judith Ebel Tsipis**
Adjunct Assistant Professor of Biology
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- William Tucker**
Lecturer in Legal Studies (Guberman Fellow)
Ed.D., Columbia University
- Thomas R. Tuttle Jr.**
Professor of Chemistry
Ph.D., Washington University
- Milton I. Vanger*****
Professor of History
Ph.D., Harvard University
- Pierre Van Moerbeke***
Visiting Professor of Mathematics
Ph.D., Rockefeller University (University of Lieges)
- Helen Van Yunakis**
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Ph.D., Columbia University
- Richard Varney Jr.**
Lecturer in Physical Education
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- Carlos Alberto Vega**
Lecturer in Spanish
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- Gloria Waite**
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- Lawrence J. Wangh**
Associate Professor of Biology
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- John F. C. Wardle**
Associate Professor of Astrophysics
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- Bernard M. Wasserstein**
Associate Professor of History and Director, Tauber Institute
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- Malcolm W. Watson**
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- Richard S. Weckstein****
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- Pieter C. Wensink**
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- Kalpna P. White**
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- Arthur Wingfield**
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D.Phil., Oxford University
- Peter D. Witt**
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Ed.D., Harvard University
- Jerome Wodinsky**
Associate Professor of Psychology
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- Geoffrey Wolff**
Fannie Hurst Writer-in-Residence
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- Lawrence Wolff**
Lecturer in History
M.A., Stanford University
- Peter Woll**
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- David Wong**
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- Jonathan S. Woocher**
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Ph.D., Temple University
- William Michael Wormington**
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- Janice Yellin**
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On leave Fall Term
1983-84*
On leave Spring Term
1983-84**
On leave 1983-84***

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Science
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Near Eastern Civilization
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and Oriental Studies
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Education
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Edgar B. Zurif
Jacob Ziskind Lecturer
with rank of Professor of
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Christmas**
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1983-84*
On leave Spring Term
1983-84**
On leave 1983-84***

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On leave Fall Term
1983-84*
On leave Spring Term
1983-84**
On leave 1983-84***

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Academic Calendar

1983-1984

Fall Term

Wednesday	August 31	Returning students register. Fees are payable in full at this time. Students who register later will be fined \$10.	Thursday Friday	November 24 and November 25	No University Exercises.
Thursday	September 1	New students register. Fees are payable in full at this time. Students who register later will be fined \$10.	Tuesday	December 13	Last day of instruction for Fall Term.
Friday	September 2	Sectioning	Thursday through Thursday	December 15 December 22	Examination period. Winter Recess begins after last examination.
Monday	September 5	No University Exercises.	Wednesday	December 28	Fall term grades due and Incompletes from Spring Term 1983.
Tuesday	September 6	Opening day of instruction in courses.	Tuesday	January 3 (1984)	Final day for faculty certification that February master's candidates have completed degree requirements, including language(s) and theses, and that Ph.D. candidates have defended dissertations.
Thursday Friday	September 8 and September 9	No University Exercises.	Friday	January 14	Final day for admission to candidacy and for completion of language requirements for students expecting to earn the Ph.D. in May 1984.
Tuesday	September 20	Final day for filing Study Cards. No program changes for Fall Term may be made after this date.			
Thursday	September 22	No University Exercises.			
Wednesday	September 28	Brandeis Thursday. Thursday class schedule is in effect.			
Thursday	September 29	No University Exercises.			

Academic Calendar

1983-1984

Spring Term

Monday	January 16	Registration for students entering Spring Term. Registration procedures begins for returning students.	Friday	April 20	Final day for faculty certification that May Ph.D. candidates have defended dissertations. Final day for May degree candidates to discharge any financial indebtedness to the University.
Tuesday	January 17	First day of instruction in courses.	Wednesday	April 25	Classes resume.
Tuesday	January 31	Last day for filing Study Cards. No program changes may be made after this day.	Monday	April 30	Last day of instruction.
Monday	February 20	No University Exercises.	Thursday	May 3	Final day for deposit of Ph.D. dissertations at the Graduate School Office by May degree candidates.
Thursday	March 1	Final day for filing Application for Financial Aid for 1984-85.	Thursday through Thursday	May 3 and May 10	Final Examinations
Wednesday	March 7	Last day for May degree candidates to submit drafts of theses and dissertations to department chairs and to file Application for Degree with Graduate School Office.	Monday	May 14	Grades due for all degree candidates no later than 10 a.m. Final day for faculty certification that Master's candidates theses have been accepted.
Thursday - Friday	March 8 and March 9	No University Exercises	Sunday	May 20	Commencement.
Monday	April 2	Final day for master's candidates to complete foreign language requirement(s) for May degree. Final day for completion of language requirements for students expecting to earn the Ph.D. in February 1985.	Tuesday	May 22	All Spring Term grades due and Incompletes from Fall Term 1983.
Friday	April 13	Spring Recess begins after last class.			

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